



# **NAVAL POSTGRADUATE SCHOOL**

**MONTEREY, CALIFORNIA**

## **THESIS**

**DESIGNING THE NAVY ENLISTED SUPPLY CHAIN  
INTER-ORGANIZATIONAL COLLABORATIVE  
CAPACITY ASSESSMENT**

by

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March 2016

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**DESIGNING THE NAVY ENLISTED SUPPLY CHAIN INTER-  
ORGANIZATIONAL COLLABORATIVE CAPACITY ASSESSMENT**

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## **ABSTRACT**

Navy Enlisted Supply Chain (NESC) organizations are highly interdependent in the planning and execution processes that fuel Navy personnel end strength with new accessions. Orchestrating complex NESC outcomes across 36 months of planning for future requirements while simultaneously conducting current-day supply chain execution activities requires persistent and collaborative engagement among all stakeholders. Effective and efficient collaboration among NESC organizations is essential to optimizing the placement of “the right sailor in the right job at the right time.” This thesis identifies the relationships and processes essential to promoting effective and efficient collaboration and mission accomplishment within the NESC. Additionally, this thesis adapts the language of the Inter-Organizational Collaborative Capacity (ICC) Assessment instrument, tailoring it to NESC Quarterly Demand Planning (QDP) forum stakeholders. This thesis sets the foundation for future collaborative capacity research of the NESC. Feedback from the NESC QDP forum ICC assessment in future studies will produce a collaborative capacity road map, establishing the baseline necessary for observing, measuring, and ultimately improving the productivity and efficacy of collaboration among NESC organizations.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

AFQT	Armed Forces Qualification Test
“A” School	Basic Rating Training School
BIT	Business Improvement Team
BMT	BIT Metrics Team
BP-6	Production Management Office/Department
BP-32	Head Enlisted Community Manager
BRT	Barrier Removal Team
CFT	Cross Functional Team
CNP	Chief of Naval Personnel
COA	Course of Action
COO	Chief Operating Officer
CPF	Commander, U.S. Pacific Fleet
“C” School	Advanced in-Rating Training School
DHS	Department of Homeland Security
EXCOM	Executive Committee
ICC	Inter-Organizational Collaborative Capacity (Assessment)
IT	Information Technology
MPT&E	Manpower, Personnel, Training, & Education
N10	Resource Management
N12	Total Force Requirements
N13	Military Personnel Plans and Policy
NEASC	Navy Enlisted Accessions Supply Chain
NEC	Navy Enlisted Classification
NESC	Navy Enlisted Supply Chain
NETC	Naval Education and Training Command
NPS	Naval Postgraduate School
NRC	Navy Recruiting Command
NSTC	Naval Service Training Command
OPNAV N095	Chief of Navy Reserve
OPNAV N2/N6	Deputy Chief of Naval Operations for Information Dominance

OPNAV N95	Director of Expeditionary Warfare
OPNAV N96	Director of Surface Warfare
OPNAV N97	Director of Undersea Warfare
OPNAV N98	Director of Air Warfare
PERS-40	Navy Personnel Command, Placement and Distribution
PL	Production Line (Stakeholders)
PLM	Production Line Manager
PMO	Production Management Office
QDP	Quarterly Demand Planning
QDP BIT	Quarterly Demand Planning Business Improvement Team
RTC	Recruit Training Command
SPRT	Sub-Process Review Team
USFF	U.S. Fleet Forces Command

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## I. INTRODUCTION

The word *collaboration* appears frequently throughout the pages of the *NEASC 101 Stakeholder Guide* (Navy Enlisted Accessions Supply Chain Business Improvement Team [NEASC BIT], 2013). The guide's opening slide emphasizes that *collaboration* is an active term, essential to the effectiveness and efficiency of the Navy Enlisted Supply Chain (NESC).<sup>1</sup> The ultimate goal of the NESC is "to improve overall Fleet manning and accession training, providing a clear demand signal and ensuring a responsive supply chain" (Production Management Office [PMO], 2013b, p. 2). Proficient organizational collaboration is key to facilitating the demand signal clarity and supply chain responsiveness that ultimately enables efficiency and effectiveness in these supply chain processes.

The ability to identify the barriers and enablers to collaboration in the NESC would ultimately permit improvement of NESC efficacy in time-sensitive and resource-intensive processes. These processes are responsible for producing around 35,000 trained sailors across 87 ratings and more than 800 Navy Enlisted Classification (NEC) production pipelines annually (Production Management Office Chief Operating Officer [PMO COO], 2013, p. 3). Proper and timely identification of the barriers and enablers to collaborative processes in an organization (in this case, the Navy Enlisted Supply Chain) is imperative to mission achievement. If a barrier is identified, it may be removed or mitigated. If an enabler is identified, it may be amplified or complemented with support. Inter-organizational collaboration opens doors to realizing and interacting with these barriers and enablers and to achieving mutual benefit above what each individual organization could accomplish on its own.

To accomplish the momentous task of bringing in more than 35,000 trained sailors each year, the Navy has recruiting facilities distributed across the continental United States and U.S. territories worldwide, as well as multiservice training facilities

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<sup>1</sup> The source name reflects "NEASC," delineating "accessions," whereas subsequent mention throughout this thesis uses "NESC," leaving "accessions" out of the title. Information found in the source document about the "NEASC" applies to the broader use of the term "NESC"; NEASC only describes a part of the larger NESC construct.

concentrated along the farthest reaches of the east and west U.S. coastlines, from Groton, CT and Pensacola, FL, to Port Hueneme and Coronado, CA (PMO, 2013a, slide 30). The entire planning-to-execution process for mobilizing the resources and personnel necessary to supply hundreds of NEC pipelines takes about 36 months to complete and involves input from at least nine Production Line (PL) stakeholders (see Figure 1; NEASC BIT, 2013, slide 20).

Figure 1. Production Line Stakeholders

- Enlisted Community Managers (ECMs)
- Production Line Managers (PLMs)
- Production Line Analysts (PLAs)
- Quota Managers (QMs)
- Training Agents (TAs)
- Manning Control Authorities (MCAs)
- Placement Coordinators
- Rating Specialists
- Detailers

The Production Line Stakeholders provide input to an extensive planning-to-execution process spanning three years and producing 35,000 trained sailors for more than 800 NECs annually. Source: NEASC BIT. (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team, slide 20.

This thesis focuses on the utility of the Inter-Organizational Collaborative Capacity (ICC) Assessment, developed by Hocevar, Jansen, and Thomas (2006, p. 257), to measure the collaborative capacity within an organization. Their research defines collaborative capacity as “the ability of organizations to enter into, develop, and sustain inter-organizational systems in pursuit of collective outcomes” (Hocevar et al., 2006, p. 256), a definition born from the careful analysis of responses from various Department of Homeland Security (DHS) stakeholders operating in civilian, government, and military organizations (p. 258). Their research further explains that collaboration makes best use of scattered organizational resources, creating a mission-focused network that can more efficiently identify and utilize resources toward mission completion (p. 257).

This thesis identifies the key relationships and processes essential to successful collaboration and mission accomplishment within the NESC. Additionally, this thesis establishes tailored language within the ICC assessment instrument that will best relate to identified stakeholders within the supply chain process. Feedback from the ICC assessment in future studies will produce a collaboration “road map,” establishing the foundation necessary for observing, measuring, and ultimately improving the productivity and efficacy of NESC collaborative networks over time.

In order to understand the collaborative contexts in which the NESC is operating, Chapter II presents the Background of this thesis, introducing the ICC model, NESC organizations, processes, stakeholders, and organizational interdependence. Chapter III, Research Design, then enters a description of the primary research questions under the premise of the Navy’s Total Force Vision. Chapter III also identifies the ICC assessment audience and further applies the ICC diagnostic to the context of NESC QDP stakeholders. Chapter III finishes with an archival information analysis and an overview of the scope and limitations of the research. Chapter IV, Findings and Analysis, examines NESC barriers and enablers to productivity utilizing documented informal survey results and ideas from NESC leadership, and applies this information to the importance of the collaborative capacity assessment in the NESC. Chapter IV also describes the specific tailoring of the ICC Assessment required for application to the NESC, as well as bias considerations. Finally, this thesis closes with Chapter V, Conclusions and Recommendations, with the follow-on appendices containing a draft introductory letter for proposed survey participants, the tailored ICC survey, and a general survey administration procedure for follow-on research.

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## **II. BACKGROUND**

This chapter introduces the ICC model, its five key design factors, and 13 respective sub-factors. The ICC model is observed in the context of the NESC's Quarterly Demand Planning (QDP) and Business Improvement Team (BIT) processes and their associated opportunities for collaboration. Task interdependence (pooled, sequential, and reciprocal) is also introduced and applied to the context of the NESC.

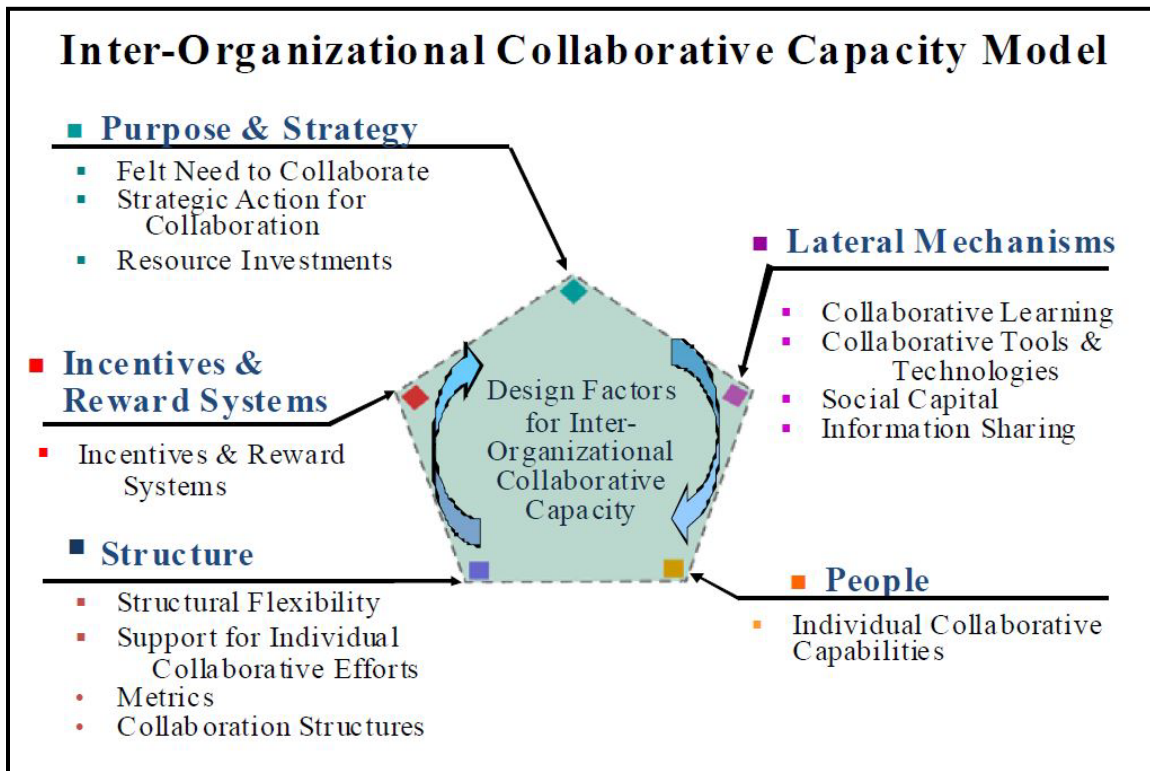
### **A. INTER-ORGANIZATIONAL COLLABORATIVE CAPACITY MODEL DEVELOPMENT**

In the days following September 11, 2001, and Hurricane Katrina in 2005, it became overwhelmingly evident that municipal, state, regional, and federal security organizations could, through collaboration, unify their strengths and form stability across their weaknesses to better move available resources toward a common goal (Hocevar, Jansen, & Thomas, 2011, p. 1). The desire to mitigate failures stemming from gaps in organizational collaborative capacity during large-scale crises prompted a study by an NPS research group specializing in collaborative innovation (Hocevar et al., 2006, p. 255). The NPS group's research drew on the knowledge and experiences of a broad variety of DHS managers who had been intimately involved with response planning and prevention for manmade and natural disasters (Hocevar et al., 2006, p. 256). The DHS managers' query and survey responses collected by the NPS group ultimately culminated into what is now known as the model for Inter-Organizational Collaborative Capacity (ICC): "[assessing] different factors that contribute to an organization's capacity to collaborate with other organizations" (Hocevar et al., 2012b, p. 3).

#### **1. The ICC Model**

The model for ICC, created by Hocevar, Jansen, and Thomas (2012b), shown in Figure 2, identifies five key domains that impact the inter-organizational collaborative capacity of an organization: Purpose & Strategy, Incentives & Reward Systems, Structure, Lateral Mechanisms, and People (p. 3).

Figure 2. Inter-Organizational Collaborative Capacity Model



The ICC model outlines five key design factors and their respective sub-factors in the inter-organizational collaborative capacity of an organization. Source: Hocevar et al. (2012b, May 1). *Inter-Organizational Collaborative Capacity (ICC) Assessment*. Monterey, CA: Naval Postgraduate School (p. 3).

In their first study of homeland security collaborative capacity, Hocevar et al. (2006) identified factors known to either support or break down effective collaboration using an inter-organizational systems perspective (p. 255). Their subsequent study then examined how the identified collaborative capacity factors interacted with organizational success, using the expertise and insights of senior homeland security leaders (p. 255).

## 2. ICC Model Domain and Collaborative Capacity Factors Overview

This section contains a brief overview of the ICC Model domains and respective collaborative capacity factors as presented in Figure 2. There are five primary domains represented in the model: Purpose and Strategy, Lateral Mechanisms, People, Structure, and Incentives & Reward Systems, as well as 13 factors which represent the more detailed elements of the model (Hocevar et al., 2012b, p. 3). The domains and factors work in concert to form a tangible representation of collaborative capacity in an

organization. Improving upon organizational collaborative capacity assumes the active involvement of leadership and the provision of a thoughtful organizational construct in order to facilitate the removal of barriers and perpetuate the complement of enablers of inter-organizational collaboration (Hocevar et al., 2012b, p. 3).

**a. Purpose and Strategy—Felt Need to Collaborate**

The *felt need to collaborate* encompasses whether or not an organization recognizes the import and/or benefits associated with inter-organizational collaboration, whether or not the organization is in agreement concerning the purpose and value of collaboration, and what priority level an organization assigns to collaboration (Hocevar et al., 2012b, p. 6). This factor also contains a discussion of whether or not an organization's mission accomplishment requires collaboration (p. 6).

**b. Purpose and Strategy—Strategic Action for Collaboration**

The *strategic action for collaboration* factor addresses whether or not there are clearly established goals guiding inter-organizational collaboration and whether or not an individual organization is willing to and/or plans in assisting other organizations in succeeding with their goals (Hocevar et al., 2012b, p. 6). Additionally, this factor observes leaders of organizations and whether or not they underscore the import of collaboration within their own organization and/or work well with other organization leaders in promoting collaborative efforts (p. 6).

**c. Purpose and Strategy—Resource Investment in Collaboration**

*Resource investment in collaboration* observes the organizational willingness and commitment of an organization to invest its budget and resources toward inter-organizational collaboration (Hocevar et al., 2012b, p. 7). It also addresses the adequacy of personnel assignments in an organization to effectively accomplish inter-organizational collaboration (p. 7).

**d.      *Incentives and Reward Systems***

*Incentives and reward systems* observes the absence or presence of rewards for organizational members with regard to the time and energy invested in inter-organizational activities and relationships (Hocevar et al., 2012b, p. 8). It also observes whether or not collaborative talents, achievements, and employee engagement in inter-organizational activities at work are considered for advancement and promotion (p. 8).

**e.      *Structure—Structural Flexibility***

*Structural flexibility* examines the efficacy of an organization's established procedures for adapting to changing requirements in interdependent organizations, and de-conflicting barriers to collaboration (Hocevar et al., 2012b, p. 7). This factor also observes whether or not an organization invests the appropriate time and energy for supporting this synergy with other organizations (p. 7).

**f.      *Structure—Support for Individual Collaboration Efforts***

The *support for individual collaboration efforts* factor encompasses various provisions made by an organization and its leadership which enable its members to engage in successful collaboration with other interdependent organizations (Hocevar et al., 2012b, p. 10). Such provisions include the establishment of clear goals and constraints, and whether or not the organization follows through on inter-organizational task force recommendations, gives its members authority they need to achieve collaboration with other organizations, and/or listens to subordinate input for inter-organizational collaboration (p. 10).

**g.      *Structure—Metrics for Collaboration***

The *metrics for collaboration* factor observes whether or not clear performance standards have been established by which to evaluate an organization's inter-organizational work, and whether or not associated measurement criteria evaluates both the efforts and outcomes of inter-organizational collaboration (Hocevar et al., 2012b, p. 7).

***h. Structure—Collaborative Structures***

The *collaborative structures* factor observes the structured foundation upon which inter-organizational collaboration functions (Hocevar et al., 2012b, p. 10). Structural factors include whether or not an organization has created an appropriate and adequate employee structure, whether or not specific organizational roles and responsibilities have been established, and whether or not sound processes and procedures are in place, to facilitate and guide successful inter-organizational collaboration (p. 10).

***i. Lateral Processes—Collaborative Learning***

*Collaborative learning* observes whether or not an organization has the values and norms associated with learning from and about other organizations in a way that will promote inter-organizational collaboration (Hocevar et al., 2012b, p. 8). This factor also considers the presence or adequacy of the human and financial resources dedicated to supporting an organization's training with other organizations (p. 8).

***j. Lateral Processes—Collaborative Tools and Technologies***

The *collaborative tools and technologies* factor assesses support to inter-organizational collaboration via effective planning and communications tools and technologies, as well as whether or not information systems in place facilitate interoperability amongst interdependent organizations (Hocevar et al., 2012b, p. 10).

***k. Lateral Processes—Social Capital***

The *social capital* factor observes collaborative network capacity, assessing whether or not organizational members know who their respective counterparts are in interdependent organizations and whether or not members know whom to contact for information they need, from those organizations (Hocevar et al., 2012b, p. 9). This factor also examines the level of initiative taken by organizational members to build and develop strength in professional inter-organizational relationships (p. 9).

***l. Lateral Processes—Information Sharing***

*Information sharing* observes whether or not an organization has the values and norms associated with sharing information with other organizations (Hocevar et al., 2012b, p. 8). This assessment factor takes account of an organization's willingness and adequacy in sharing relevant information with other interdependent organizations, in order for the interdependent organizations to successfully complete their own work (p. 8).

***m. People (Individual Collaborative Capacities)***

This domain contains one factor, *individual collaborative capacities*, assessing the overall collaborative skills and attitudes of individual organization members (Hocevar et al., 2012b, p. 9). It explores the ability and willingness of members to respect the expertise and appreciate the perspectives of other interdependent organizations with which they work (p. 9). The factor also observes member willingness to engage other organizations in shared decision-making processes and to seek input from them when necessary (p. 9). This factor additionally encompasses member understanding of other organizations' capabilities and how their own organization's work relates to the work of other interdependent organizations (p. 9).

**B. NESC COLLABORATIVE CONTEXT**

This thesis directly supports the chief of naval personnel's (CNP's) Navy Enlisted Supply Chain Vision and Concept of Operations, which states that the "NESC encompasses all echelons of the Manpower, Personnel, Training, and Education Enterprise and crosses multiple organizational lines...[requiring] cooperation and coordination among all supply chain stakeholders" (PMO, 2013b, p. 2). These NESC stakeholders are also known as the production line (PL) stakeholders. As implied in Figure 3, they are expected to collaborate and to "break down barriers and obstacles, empower creative thinking, drive innovative solutions, and effect cultural change within the Supply Chain" (NEASC BIT, 2013, slide 20).

Figure 3. Production Line Stakeholders Collaboration



Collaboration among a dynamic group of PL stakeholders is essential to the effective and efficient operation of the NESC. Source: Navy Enlisted Accessions Supply Chain Business Improvement Team (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team, slide 20.

In order to guide NESC collaborative efforts, there are two executive committees (EXCOMs) within the NESC that direct supply chain planning and execution (PMO COO, 2013, slide 12). The first NESC EXCOM is the Quarterly Demand Planning (QDP) Flag Panel forum consisting of several flag-level members who oversee current and future-year demand planning outcomes (PMO COO, 2013, p. 12). This enlisted QDP forum is headed by OPNAV N132 (Enlisted Plans and Policy) and meets on a quarterly basis throughout the fiscal year to discuss accessions and production planning issues (PMO COO, 2013, slides 6 & 14). The second EXCOM is a supply chain management initiative known as the Business Improvement Team (BIT; PMO COO, 2013, slide 12). This flag-level decision-making team consists of stakeholder leadership from multiple NESC organizations, chartered to identify and remove NESC barriers to production

(NEASC BIT, 2013, slide 15). The BIT is headed by Deputy CNP and NETC and meets on a monthly basis to continually break down supply chain barriers, make conflict-mitigating decisions, and leverage cross-functional team capabilities to streamline supply chain processes (PMO COO, 2013, slide 15).

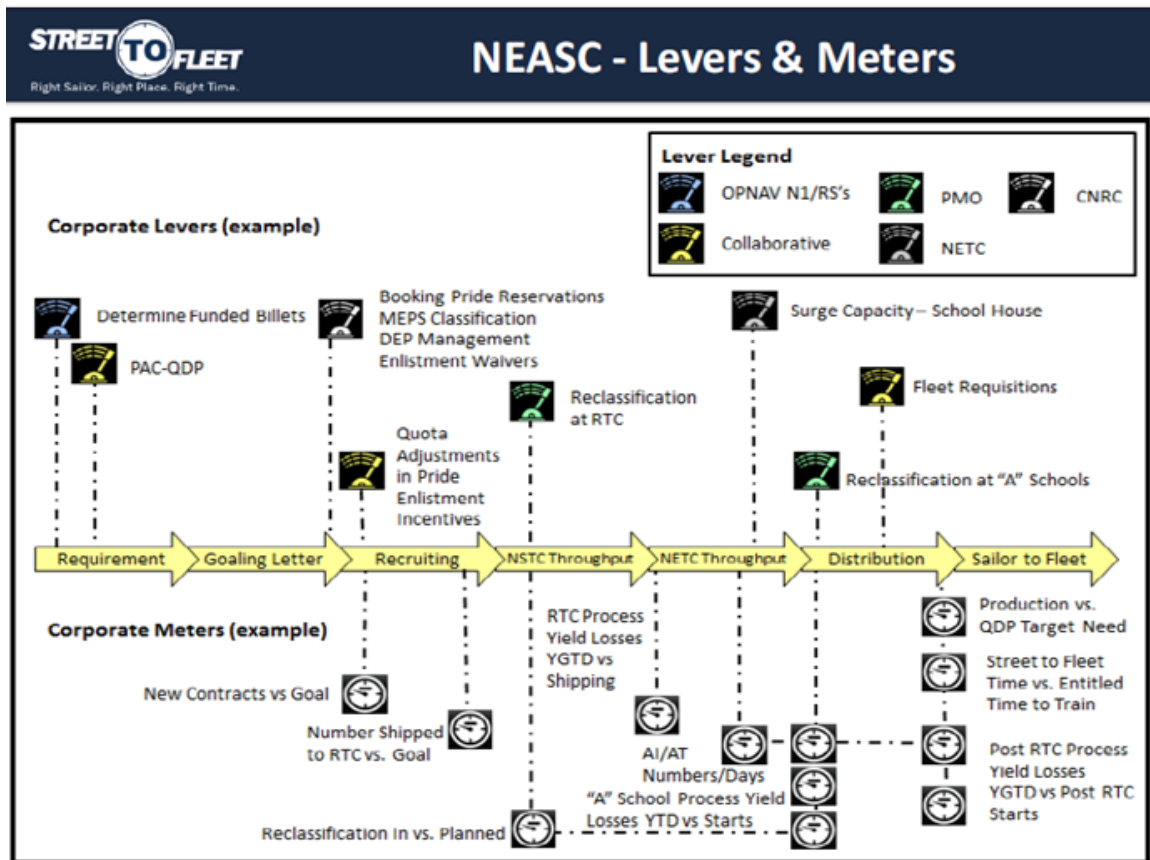
### **C. LEVERS AND METERS**

*End strength* is the total count of Navy active duty military personnel on the last day of the fiscal year, defined by the following equation:  $\text{Begin Strength} + \text{Gains} - \text{Losses} = \text{End Strength}$ . End strength depends upon NESC processes working in concert to provide and maintain a consistent, trained, and ready sailor work force to the Fleet. All PL stakeholders within the NESC must operate with the cognizance that their respective organization's planning input and production affects end strength for the Navy. The production line (PL) stakeholders are the enlisted community managers, production line managers (PLMs), production line analysts, quota managers, training agents, manning control authorities, placement coordinators, rating specialists, and detailers within the NESC, responsible for the acquisition, development, distribution, and retention of Navy personnel (NEASC BIT, 2013, slides 9, 20).

To most efficiently affect contribution to end strength, PL stakeholders manage their individual production lines with “levers” and “meters”, tools which may be used to modify and measure rates of production as necessary to provide the required outflow of “product” to the next NESC organization or to the Fleet (see Figure 4). The implementation of levers may entail such actions as adjusting funded billets, adjusting enlistment waiver allowances, and adjusting “A” School reclassification thresholds (NEASC BIT, 2013, slide 14). The use of meters can include measures and comparisons such as goaled contracts versus new contracts attained, entitled time to train versus actual “street to Fleet” time taken to train, and training school expected attrition versus actual training school attrition (NEASC BIT, 2013, slide 14). The increased proficiency of collaborative capacity in forums such as the NESC QDP holds potential for facilitating demand signal clarity and supply chain responsiveness in an environment of complex interdependence.



Figure 4. NESC Levers and Meters



Levers (top half of graphic) provide means of adjusting production line flow at various organizational stops in the process. Meters (bottom half of graphic) provide a way to measure that flow. Collaboration among NESC stakeholders permits an informed use of levers and meters to achieve end strength. Source: Navy Enlisted Accessions Supply Chain Business Improvement Team (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team, slide 14.

## D. THE QDP PROCESS

The enlisted QDP Conference occurs once each quarter of the fiscal year, with representatives from the following stakeholder organizations providing decision-making input (QDP&BIT, 2015, p. 15):

- N10 (Resource Management)
- N12 (Total Force Requirements)
- N13 (Military Personnel Plans and Policy)
- BP-32 (Head Enlisted Community Manager)
- PERS-40 (Navy Personnel Command, Placement and Distribution)

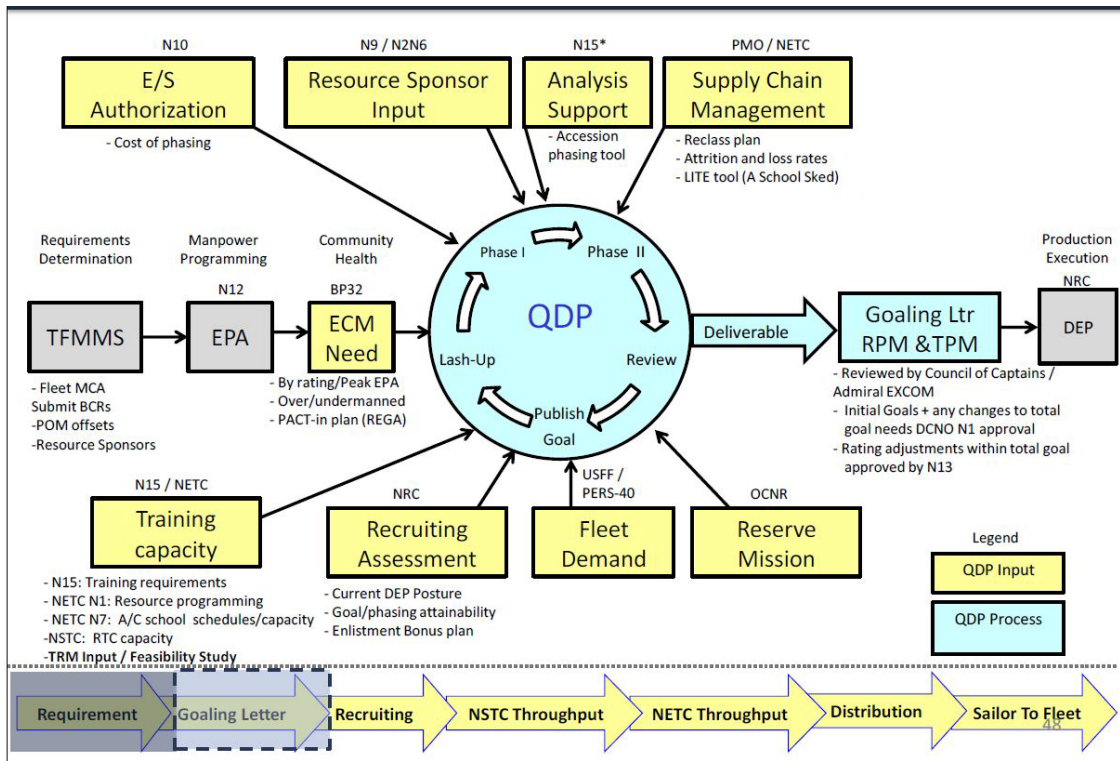
- NRC (Navy Recruiting Command)
- NETC (Naval Education and Training Command)
- NSTC (Naval Service Training Command)
- USFF (U.S. Fleet Forces Command)
- CPF (Commander, U.S. Pacific Fleet)
- N095 (Chief of Navy Reserve)
- BP-6 (Production Management Office/Department)
- OPNAV N95 (Director of Expeditionary Warfare)
- OPNAV N96 (Director of Surface Warfare)
- OPNAV N97 (Director of Undersea Warfare)
- OPNAV N98 (Director of Air Warfare)
- OPNAV N2/N6 (Deputy Chief of Naval Operations for Information Dominance)

When a new manning requirement is identified, input is collected from NESC stakeholders and presented to leadership for final decision. This final decision ultimately becomes the Goaling Letter, a communication that signals required production levels to NRC (NEASC BIT, 2013, slide 48). The QDP process, consisting of the Lash-Up, Phase I, Phase II & Review, and Goal Publishing, takes into consideration variables such as cost, supply, demand, attrition, and capacities throughout the supply chain process (NEASC BIT, 2013, slide 48). QDP combines these data into a feasible production execution plan that will result in the required volume of sailors to the Fleet (NEASC BIT, 2013, slide 48). The NESC *planning* process takes place through QDP to

- Leverage “roundtable” collaborative input from stakeholders in its forum
- Focus on emergent issues, strategic direction and accession planning
- Consider risk of execution associated for each proposed course of action (COA) as a group (PMO COO, 2013, p. 15).

The NESC *execution* process recruits to Goaling Letter requirements and provides trained sailors to the Fleet. In contrast to the QDP planning process, the execution process is a more linear collaboration between stakeholders, as supply chain handoffs from one NESC organization to another are executed in day-to-day operations (see Figure 5).

Figure 5. Quarterly Demand Planning and Execution Summary



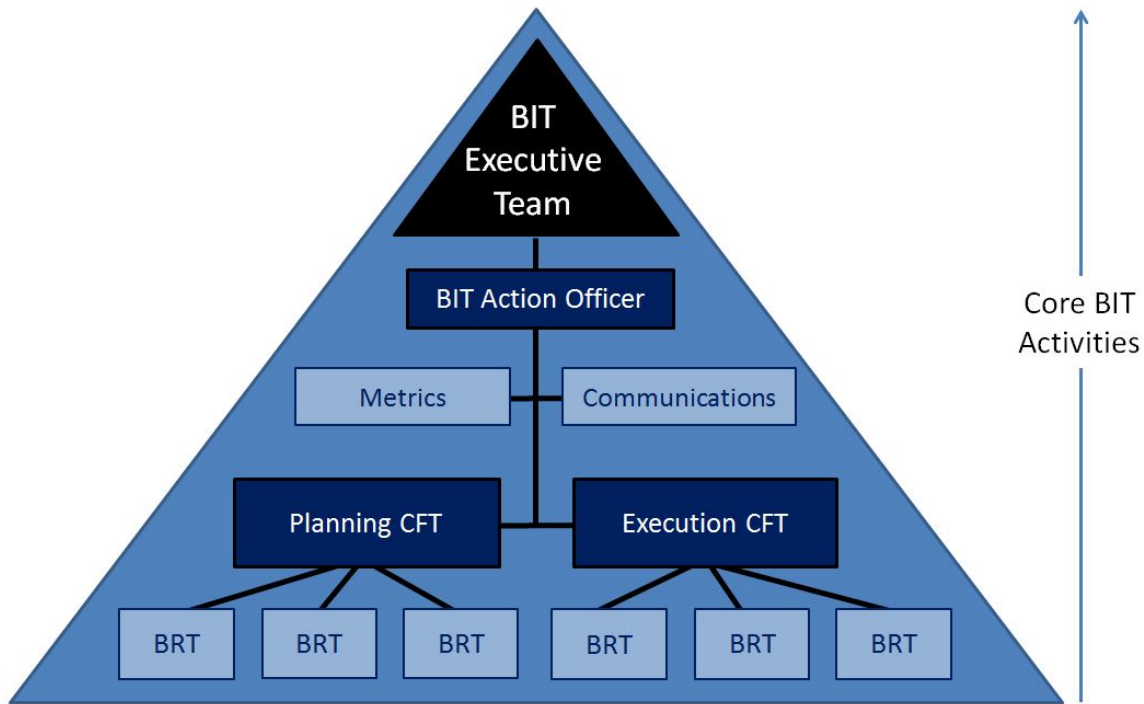
After a Fleet requirement is identified, input is collected from NESCS stakeholders and consolidated into the “Goaling Letter” via QDP “roundtable” collaboration among stakeholders (top majority of figure). In contrast, the process of Goaling Letter execution, from prospect recruitment to a sailor’s actual arrival to the Fleet, reveals a much more linear collaborative relationship between NESCS stakeholders (see the arrow progression at bottom of figure). Source: Navy Enlisted Accessions Supply Chain Business Improvement Team (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team, slide 48.

Each stakeholder representative member at the QDP conference has the opportunity to consider a set of proposed courses of action (COAs) for NESCS planning and execution in preparation for the next quarter (QDP&BIT, 2015, p. 18). Stakeholder assessments of COAs employ red, yellow, and green markers in conference presentations to indicate respective NESCS organizational ability to execute each COA, as well as associated risk with that execution (QDP&BIT, 2015, p. 18). A green marker indicates “executable with low risk”, yellow indicates “executable with high risk”, and red indicates “non-executable” (QDP&BIT, 2015, p. 18). Stakeholder representative members also indicate their respective NESCS organization’s primary COA preference, accession phasing, and include any amplifying comments helpful to understanding the reasoning of their

decisions in order to best inform other members of the QDP conference of their anticipated abilities or challenges in achieving the COAs (QDP&BIT, 2015, p. 18).

In 2008, the Chief of Naval Personnel created the Production Management Office (PMO) and charged it with leading the effort to improve supply chain operations of NESC pipelines to better reflect the operational efficacy of top private-sector supply chains (PMO, 2013b, p. 14). The creation of the BIT panel in November 2010 was a direct answer to this need, with the ultimate purpose of inducing more accurate, effective, and efficient sailor placements to the Fleet. The BIT structure (see Figure 6) brings together Cross Functional Teams (CFTs), Barrier Removal Teams (BRTs), Sub-Process Review Teams (SPRTs), and a BIT Metrics Team (BMT) to break down supply chain barriers and make process improvements (NEASC BIT, 2013, slide 17). The SPRTs and BMTs primarily act to collect information and data and to perform analyses, whereas CFTs primarily work to induce collaboration at periodic Production Alignment Conferences for resolving issues in NESC planning, execution, and information technology (IT; PMO COO, 2013, p. 16). Each CFT utilizes BRTs to execute action in breaking down barriers to productivity; the BRTs document and standardize existing processes and develop any new processes essential to resolving production flow misalignments (p. 16).

Figure 6. BIT Construct



Barrier Removal Teams (BRTs) directly support Cross Functional Teams in documenting, standardizing, and creating processes for resolving production flow misalignments in planning and execution (PMO COO, 2013, p. 16). BRTs and CFTs ultimately support the BIT Executive Team in efforts to improve supply chain operations. Adapted from: Navy Enlisted Accessions Supply Chain Business Improvement Team (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team, slide 17.

## E. BIT AND QDP (EXCOM) ALIGNMENT

The complexity of orchestrating NESC outcomes across 36 months of roundtable planning for future requirements while conducting perpetual execution of a linearly interdependent supply chain requires a persistent engagement among all stakeholders. The vehicle of this essential stakeholder engagement is *collaboration*, a networking relationship that QDP and BIT forums strive to inspire by bringing NESC leadership and subject matter experts together to tackle multifaceted supply chain problems. The goal of this thesis is to provide Navy manpower, personnel, training, and education (MPT&E) leaders with a foundational method for measuring the NESC collaborative capacity associated with these forums in order to better understand, and ultimately improve,

collaborative effectiveness. To achieve this, this thesis adapts an assessment instrument from the original ICC assessment created by Hocevar, Jansen, and Thomas, tailoring it specifically for assessing collaboration within the QDP forum.

The BIT has identified a clear need for improved communication among NESC stakeholders. The *NESC BIT Offsite Communications Report* (2012) states, “In many cases, NESC communications have not flourished beyond the immediate needs of individuals, teams or small groups, which has prevented a sort of cross-pollination of ideas, information and best practices that support broader levels of understanding and accelerated learning” (NESC BIT, 2012, p. 1). The report goes on to note that the collaborative challenge for the NESC is also influenced by inherent complexities of its scale and supply chain processes. While collaboration can indeed become more difficult as organizational scales increase, the dynamics of improving inter-organizational efficiency on any scale highlights the imperative need for a thoughtful, orchestrated plan for collaboration.

## **F. INTER-ORGANIZATIONAL COLLABORATIVE FACTORS**

The NPS inter-organizational collaboration research team identified both “success” factors and “barrier” factors to collaboration in their study, categorizing each factor under one of the five key domains: Purpose and Strategy, Structure, Lateral Mechanisms, Incentives and Rewards Systems, and People (Hocevar et al., 2006, p. 260; Hocevar et al. 2012b, p. 3). A table of the most common success and barrier factors as identified by Hocevar et al. may be seen in Table 1.

Table 1. Most Common Factors Affecting Inter-Organizational Collaboration

Success Factors	Barrier Factors
<ul style="list-style-type: none"> <li>• “Felt need” to collaborate</li> <li>• Common goal or recognized interdependence</li> <li>• Social capital</li> <li>• Effective communication and information exchange</li> <li>• Collaboration as a prerequisite for funding or resources</li> <li>• Leadership support and commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of familiarity with other organizations</li> <li>• Inadequate communication and information sharing (distrust)</li> <li>• Competition for resources</li> <li>• Territoriality</li> <li>• Lack of competency</li> </ul>

These success and barrier factors stood out among other success and barrier factors in Hocevar, Thomas, & Jansen’s “Building Collaborative Capacity” 2006 study, with the previously-listed factors being identified by at least 25% of the study’s participants. Adapted from: Hocevar et al., (2006). Building collaborative capacity: An innovative strategy for homeland security preparedness. In M. Beyerlein (Ed.), *Advances in interdisciplinary studies of work teams*, p. 260.

The collaborative success and barrier factors identified in DHS contexts in Hocevar et al.’s research parallel with “Opportunities for Collaborating” made by Barbara Gray in her book *Collaborating: Finding Common Ground for Multiparty Problems* (Gray, 1991). Gray explains that “opportunities for collaborating” occur both in “resolving conflict” and in “advancing shared visions” (Gray, 1991, pp. 6–8). The success and barrier factors identified by the NPS collaborative research team similarly represent opportunities to advance shared visions (success factors) and to resolve conflicts (barrier factors; Hocevar et al., 2006, p. 260). For example, the NPS collaborative research team identified a “felt need” to collaborate as a success factor, where organizational members recognize their interdependence with other organizations and demonstrate awareness and action toward advancing a shared vision (p. 260). When the “felt need” to collaborate is present, an organization realizes that its own success is dependent upon the success(es) of another organization; this acknowledgement of collaborative opportunity permits an organization to collaborate with an interdependent organization, and therefore advance a shared interest (vision) for the collective good of

both/all organizational stakeholders involved. Likewise, an identified barrier factor, such as “lack of familiarity with other organizations,” also identified by the NPS collaborative research team, may be mitigated with the facilitation of inter-organizational training, so that interdependent organizations that are not operating collaboratively are able to learn about their shared interests and visions with other stakeholder organizations (p. 260). If an organization is aware of success or barrier factors to collaboration, there is an opportunity for the organization to both complement and amplify its capacity for success, or to remove or reduce the barriers known to be keeping it from success. This concept of collaborative opportunity highlights how being able to identify success and barrier factors in the NESC could translate to opportunities for collaboration.

Gray’s “opportunities for collaborating” are echoed in the main tasking of the NESC PL stakeholders to “break down barriers and obstacles, empower creative thinking, drive innovative solutions, and effect cultural change within the Supply Chain” (NEASC BIT, 2013, slide 20). Both Gray’s and the NPS collaborative research team’s respective work reinforces the notion that outstanding collaborative opportunity lies in advancing shared NESC stakeholder visions and in conducting NESC stakeholder conflict resolution throughout the planning and execution processes.

Typical examples of Navy business barriers to productivity are vast system complexities, conflicting policies, budget constraints, competition between/among organizations, social differences of leadership, limited length tours of duty (fast turnover), too many people to whom to report (fragmentation), deadline friction, varying levels of process engagement, and more. From a review of the 2012 *NESC BIT Offsite Communications Report*, it appeared that many of the barriers and enablers to productivity in the NESC would fall into these (and similar) categories. These categories, in turn, also fall into the ICC model’s key factor construct. While it was considered that new ICC model key factors may exist, it was expected that most, if not all barriers and enablers found in the 2012 BIT offsite report, would fall into the validated ICC model. The classification of NESC barriers and enablers under the ICC model are further discussed in Chapter IV, Findings and Analysis, under Section B, NESC Barriers and Enablers to Productivity.



## **1. NESC Task Interdependence (Pooled, Sequential, Reciprocal)**

It is essential that supply chain conflict resolution take place in a forum where the organization's task interdependence is thoroughly understood among participants and where challenges to planning and execution may be met with collaborative problem-solving discussion. James D. Thompson introduced three main types of organizational internal interdependence, labeling pooled, sequential, and reciprocal interdependence as distinctive entities (Thompson, 2007, p. 54). Thompson also addressed the fact that "complex" organizations host all three types of organizational interdependence (Thompson, 2007, p. 54). Not surprisingly, the complex NESC is likewise host to pooled, sequential, and reciprocal organizational interdependence. Collaboration plays different roles among these varying levels of interdependence, based upon the degree to which individual organizational processes must be altered to accommodate partner organizations in the supply chain. It is important to understand how these differences in organizational interdependence within the NESC can and should affect oversight and action initiated at the QDP forum level of collaboration to ensure best practices pave the way to supply chain success.

With *pooled interdependence*, procedure is mostly, if not all, routine, in which "each part [of the organization] renders a discrete contribution to the whole and each is supported by the whole" (Thompson, 2007, p. 54). Said differently, new inputs are rare or nonexistent. There is a set procedure for transforming a specific input into a specific product, with the outcome focused on the production of volume of that product. In the NESC, pooled interdependence is well exemplified as Navy Recruiting Command identifies and unites a body of individuals interested in (and qualified for) Navy enlistment programs. While there are 26 separate Navy Recruiting Districts (NRDs) across the nation, each district is responsible for recruiting qualified individuals for naval service in their respective geographic areas of responsibility; an individual district does not depend on another district in order to make its assigned recruiting goal. At the end of each fiscal quarter and at the end of the fiscal year, the final production numbers of recruits from each district are pooled to achieve an overall recruiting goal for the year at NRC. Therefore, even if three districts, for example, are unable to meet their respective

assigned goals, the other 23 districts will be able to produce recruits independently. This independence may mean that overproduction by some or all of the other 23 districts could balance the production deficits of the other three.

Next, *sequential interdependence* demonstrates that an end product or goal is dependent upon a certain order of serial events, where the outcome of each step of the process becomes the input to the next step in the process (Thompson, 2007, p. 54). This organizational task interdependence is best seen throughout the whole construct of the NESC, as a recruit moves along the “assembly line” from applicant (NRC), to recruit (RTC), to a sailor headed to follow-on “A” and “C” Schools for on-the-job and academic training, and finally, to a fully trained sailor arriving in the Fleet. This specific sequence of training is essential throughout the NESC; an applicant must meet basic entry qualifications before they may become a recruit and attend boot camp at RTC. A recruit at RTC must then successfully complete basic physical and academic requirements to become a sailor before they move forward to specific in-rate technical training at “A” and “C” Schools. The sailor must then successfully complete “A” and/or “C” School technical training, if not heading directly to the Fleet as a Professional Apprenticeship Career Track sailor to contribute to Navy mission accomplishment in the Fleet.

The complexity of the NESC “assembly line” ventures beyond pooled and sequential interdependence when *reciprocal interdependence* manifests in cyclical processes necessary to manage the community, and “the outputs of each become inputs for the others” (Thompson, 2007, p. 55). For example, consider the difficulty of recruiting in a highly successful economy. With ample job opportunities available in the civilian market, military service could become less desirable, which could potentially translate into fewer contracts at NRDs. Assuming recruiting goals do not change, despite a lower propensity for individuals to enlist, policy must be reconsidered to permit an even flow of contracts into the Navy, as well as to incentivize those who are already in the Navy with desired ratings, to extend their contracts. First, the contract deficit must be anticipated or realized. A plan of action must then be determined to attempt to increase incoming contracts or maintain the strength of the rating in consideration.

Consider, for example, if contracts to a specific rating need to be increased: advertising could be adjusted to spur more interest in selected communities, or perhaps test scores or other requirements could be relaxed to permit those who are already interested, but do not meet current standards. However, while potentially solving an initial shortfall of contracts by permitting a higher inflow, the repercussions of changing entrance policy must also be discussed and considered: How could lowering test score requirements affect technical rating performance in “A” and “C” Schools and the Fleet? How could increasing body fat percentage limits affect sailors’ attrition at initial training and throughout their Navy careers? Furthermore, if incentives are offered to preserve existing talent in undermanned ratings, the fix is only temporary. Rating health cannot survive over time if new talent is not consistently entering and filling the ranks in undermanned ratings, because it takes time to develop trained and experienced leaders along the career path of each rating. Rating leadership cannot be maintained indefinitely, or developed instantly, to combat supply shortages. Instead, creative collaborative solutions must be developed that will complement the shared mission of the supply chain. To continue the example, if efforts to bring in new contracts to an undermanned rating are not successful, incentives could be offered to other Fleet ratings to laterally transfer in. However, this action would create new reciprocal interdependence effect concerns. How many individuals may be released from other ratings to transfer, without causing a deficit elsewhere? How long will it take to retrain the transfers? How will sailors having a higher time-in-grade affect their respective advancement opportunities in the undermanned rate to which they transfer (will there be ample opportunity for sailors transferred to advance if all or most of them are first class petty officers, for example)? At what point will an imbalance occur without new contracts initially filling the rating at lower paygrades and so forth? The collective costs and benefits of decisions must be weighed collaboratively, to identify the best decision(s) for the Navy’s overall mission, not just the individual NESC organizations’ missions.

Thompson explained “coordination by mutual adjustment” is the essential device “for achieving coordination” with regard to the complexities of reciprocal interdependence (Thompson, 2007, pp. 54–56). In such complex and dynamic situations,

comprehensive collaboration from decision-makers in a setting such as the QDP forum is required to coalesce concerns from multiple NESC leadership perspectives for the best chance at creating a balanced approach to problem solving. As sequential and reciprocal processes are folded into production procedure on top of pooled processes, task interdependence quickly becomes critical. The complexities of the NESC, from its dependence on economy fluctuations to its dependence on sequential training pipelines and the intricate interdependencies of processes used to maintain community end strength, are immense.

## **2. Mitigating Dynamic “Turbulent Conditions” through Collaboration**

Aside from common “opportunities for collaborating,” Gray also touched on the dynamic characteristics of challenges faced by interdependent organizations (Gray, 1991, p. 10). She explained that “turbulent conditions” breed an innate interdependence between and among organizations, with the “range of interests associated with any particular problem” being “wide” and “usually controversial” (Gray, 1991, p. 1.) In the NESC, these “turbulent conditions” can manifest as government and military policies change, fiscal constraints narrow, and current national and global events evolve, to name a few. Some of these “turbulent conditions” comprehensively impact NESC operations, while others only partially affect certain NESC portions or organizational groups. No matter the cause, prompt and coordinated effort among NESC stakeholders is necessary to counteract any potential negative effects and to leverage any available opportunity.

Consider how abrupt economic and national events beyond governmental control can both cause and influence turbulent conditions within the NESC. Fiscal year 2000 had proven challenging to Navy Recruiting as a very low national unemployment rate hovered around 4 percent (Bureau of Labor, 2015). A report by RAND in 2002 described 1999 as one of two “defense manpower [crises] since the inception of the all-volunteer force in 1973.” The contributing conditions were the robust economy, rising recruiting targets, and arguments over retirement benefit fairness; all conditions had military services struggling to make goal (Asch et al., 2002, pp. iii–iv). An exceptionally low unemployment rate not only meant that Navy Recruiting Command had to compete more

readily with other businesses for employees, but it also meant that Bureau of Navy Personnel-3 community managers had to cope with larger numbers of sailors leaving the service for civilian employment.

The tragic terrorist attacks of September 11, 2001 may have been the turning point for this recruiting hardship, with the Congressional Budgeting Office stating in a 2006 report that the “Navy successfully recruited 100 percent of its decreasing requirement each year from 2000 through 2005” (CBO, 2006, p. 54). Recruit quality entering the active Navy also increased; from 2000 to 2005, recruit percentages of high school graduates increased from 90% to 97% and recruit percentages in Armed Forces Qualification Test (AFQT) categories I to IIIA<sup>2</sup> increased from 64 percent to 74 percent (CBO, 2006, p. 55). After witnessing the terrorist attacks of September 11, many Americans changed their employment plans after high school and college graduation, leaving their civilian employers in order to serve in defense of their nation. Many of those already in the Navy who had considered separating to join the civilian workforce opted to sign recommitments instead. The challenge of recruiting quantity along with quality was not as difficult as it had been. Additionally, Navy community managers were able to retain experienced and tenured leadership that they may have otherwise lost to the competition of civilian employment market before the attacks.

The dynamic shift in recruiting production following the attacks of September 11 offers a poignant illustration of how “turbulent conditions” may manifest unexpectedly and how divergent those conditions’ effects may be. It further demonstrates how external influences can affect the entirety of the NESC, from NRC to the Fleet, and why collaboration in a heavily interdependent supply chain is essential to maintaining stalwart end strength. While occurrences of “turbulent conditions” are relatively rare, having a collaborative network in place and in practice before any such adversity manifests and has the opportunity to affect an organization requires preparation. “Turbulent conditions” in context of the NESC, for example, could include, but not be limited to, events such as stock market crashes and natural disasters. Such events have the potential to change

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<sup>2</sup> AFQT category I: 93–99 percentile score range; category IIIA: 50–64 percentile score range.

resource availability and inflow to the NESC in a short amount of time. Creating an instant collaborative network to continue operations with minimal negative effect is often an impossible luxury during such challenging circumstances, and the importance of a proactive and comprehensive collaborative capacity organizational structure in a sequentially and/or reciprocally interdependent organization cannot be overemphasized.

#### **G. NESC KEY AREAS OF INTERDEPENDENCE AMONG (STAKEHOLDER) ORGANIZATIONS**

The NESC process mirrors that of commercial supply chains as civilians (“raw material”) are recruited, “sorted” into ratings via selection and classification processes, “assembled and polished” through “sailorization” and follow-on apprenticeship and/or advanced skills training, and finally “shipped/delivered” to the Fleet or additional training schools by detailers (NEASC BIT, 2013, slide 13). NESC stakeholders hold active roles and responsibilities in the control and management of their respective segments of the supply chain process (NEASC BIT, 2013, slide 11). Each successive stakeholder organization is dependent upon the preceding organization to deliver the input for its respective process. With the collective goal of the NESC to enable “fit,” or the “right sailor in the right job at the right time,” critical handoffs occur where supply, production, and demand intersect (Satterwhite, 2014, p. 13). More specifically, NESC critical handoff points occur between recruiting (supply) and accessions training (production); accessions training and technical training (also production); and technical training and distribution (demand), or respectively, between NRC and NETC; internally within NETC (accessions training and NETC technical training); and between NETC and NPC (Satterwhite, 2014, p. 13).

NESC stakeholder interdependence is defined by the individual responsibility of each organization to produce an expected product for the next organization (customer) in the supply chain. NESC stakeholder interdependence is also defined by each organization’s duty to inform the other NESC organizations of its capability or inability to produce that product. As discussed, collaboration manifests in a roundtable forum in QDP planning stages, while it manifests in the linear forums of supply chain handoffs in execution stages. This is an ongoing cyclical relationship, where the actual production of

an organization in an execution phase informs its projected capability for subsequent planning phases. As an example of this cyclical relationship, there is an expected rate of attrition from military boot camp for a variety of reasons, including but not limited to medical, legal, security clearance, failures to adjust, and physical fitness failures. NRC may successfully meet its shipping goal of recruits to RTC for a certain period of time, but should the attrition rate rise and a higher number of shippers fail to graduate boot camp than what is expected, that feedback (from the execution phase) would be used to inform future recruiting planning. Depending on the cause of the rise in attrition at boot camp, NRC may need to recruit a higher number of applicants in order to offset it.

Likewise, the decisions made in the planning phases affect production in the respective execution phases. For example, if NRC does not adjust its recruiting goals higher for its individual recruiting districts across the nation to offset a higher expected attrition rate at RTC, the districts will not know that they respectively need to produce a higher total of recruits for shipping to RTC (pooled interdependence). This shortage would translate to certain ratings graduating a deficit of sailors from RTC, and ultimately to the Fleet. Such a misstep in the planning phases could translate to problematic execution phase shortfalls and end-strength instability in the long run. The NESC interdependence on any given day is therefore mostly pooled and sequential, with a reciprocal interdependence providing a feedback loop for the improvement of processes.

It is important to note that often outside influences, which are considered “day-to-day” challenges for the NESC (not “turbulent” conditions), may induce periods of higher reciprocal interdependence. For example, if commercial airlines experience a mass shortage of airplane mechanics, they may offer highly competitive incentives to entice experienced mechanics to join their workforce. Should these incentives cause a large enough number of Navy aircraft mechanics to reconsider continuing their employment with the Navy, the reciprocal interdependence of the NESC will have a much more active role in guiding the balance to achieve end strength in the long-run. Could a loss of experienced aircraft mechanics be anticipated with enough lead time to prevent a detrimental loss of experience to the Navy? What could a surge of aircraft mechanics leaving the Fleet do to mission accomplishment in the short run? Would policy need to

dictate a stop-loss to prevent experienced members from leaving? Should (or could) this be done through incentives? What would that look like from the budget perspective (would it cost more to incentivize and retain current talent, or to attain new talent—would it even be a consideration that new talent could replace seasoned talent)? Would tailored advertising and increased recruiting goals for aircraft mechanics be enough to counteract anticipated losses?

The bottom line is that smooth operations of the NESC are based around pooled and sequential interdependence; a specified volume of trained sailors are needed by the Fleet, and in order to produce those trained sailors, an ordered process of training must take place. However, the NESC does not operate in a vacuum. Outside influences to the system can and do challenge the day-to-day operations of the NESC, and reciprocal interdependence appears when shortages, overages, or interruptions to the sequence of training in the supply chain require intervention to maintain balance of production.



### III. RESEARCH DESIGN

The design of this thesis's research is based on previous inter-organizational collaborative capacity research at the NPS conducted by Hocevar, Jansen, and Thomas (2012b) to measure collaborative capacity as it applies to enhancing national security. Their research emphasizes a need for interdependent organizations to harness the power of collaboration in order to “increase innovation, lower cost, and increase cycle time” while still acknowledging the complexities of competing organizational interests (p. 3). Their research also acknowledges that perfect alignment in all facets of inter-organizational operation simply may not be possible (Hocevar et al., 2012b, p. 3). The research group's ICC model translates well to measuring collaborative capacity in the NESC supply chain construct, considering the organizational purpose and strategy, incentives and reward systems, structure, lateral mechanisms, and people in defining the enabling and barrier characteristics to supply chain efficacy and efficiency (Hocevar et al., 2012b, p. 3).

#### A. NAVY'S TOTAL FORCE VISION

The CNO, CNP, and chief of naval reserve (CNR) demonstrate by example that collaboration is central to Navy Total Force strength. The foreword of their 2010 *Navy's Total Force Strategy for the 21st Century* explains that it was penned with collaborative input from the Deputy Chief of Naval Operations (DCNO, MPT&E), Office of the Chief of Navy Reserve, Navy Education and Training Command (NETC), Navy Personnel Command (NPC), NRC, and the Navy Enterprises (Ferguson, Roughead, and Debbink, 2010, p. 3). The strategy outlines a Navy Total Force vision, mission, and strategic imperatives, describing four “key enablers” for success via MPT&E operations (Ferguson et al., 2010, pp. 9–10). One of the key enablers, “*innovation and collaboration*,” highlights a critical Navy need to leverage “research and development, modeling and analysis, and pilot programs to maintain our competitive edge” in a highly competitive global workforce (Ferguson et al., 2010, pp. 9–10). This thesis serves as a decisive answer to that call, developing a foundation for measuring collaborative capacity in the

NESC that will eventually streamline supply chain processes and inform best practices to the same.

Hocevar et al.'s research at NPS demonstrates how collaborative capacity specifically impacts mission productivity in homeland security contexts. Their research explores why collaboration in the early planning phases of disaster preparation tends to be exceptionally difficult and what factors might be leveraged to mitigate those barriers (Hocevar et al., 2006, p. 257). The team ultimately determines that homeland security collaborative efforts are “occurring in the context of under-designed institutional relationships” and that barriers to success are likely resulting from conflicting missions, goals and incentives (Hocevar et al., 2006, p. 272). It is feasible then, that similar institutional relationship deficiencies exist in NESC collaborative planning and execution forums, and that, perhaps, conflicting missions or conflicting goals and incentives may contribute to perpetuating deficiencies in alignment between and among NESC stakeholders.

## **B. RESEARCH STRUCTURE**

### **1. Primary Research Questions**

In order to facilitate edits to the ICC Assessment that will best apply to the collaborative capacity of the NESC QDP forum, three primary questions are examined:

1. Who are the NESC QDP forum process stakeholders (organizations)?
2. What are the key areas of interdependence between and among the NESC QDP forum organizations?
3. How can we best tailor the ICC Assessment to identify points of leverage in the NESC QDP forum where improved collaboration could best affect efficiency and productivity?

NESC QDP forum stakeholders, as previously listed in Section B (NESC Collaborative Context) of Chapter II, were identified by reviewing a 2015 Quarterly Demand Planning and Business Improvement Team brief where stakeholders were listed next to their respective assessment and planning inputs to Navy Enlisted Supply Chain Planning and Execution for fiscal years 2015 and 2016 (QDP&BIT, 2015, p. 15). Key areas of interdependence among the NESC QDP organizations were identified by

reviewing the members of the NESC QDP forum and the pooled, sequential, and reciprocal relationships between and among these organizations within the construct of the NESC. The “critical handoffs” defining these key areas of interdependence between NESC organizations are specifically addressed in Section G (NESC Key Areas of Interdependence among [Stakeholder] Organizations) of Chapter II in this thesis.

Tailoring the ICC Assessment to the NESC QDP forum stakeholders first meant that a parallel between the ICC Assessment’s domains and factors and the NESC QDP stakeholder’s domains and factors would need to be confirmed. In order to identify collaboration domains and factors among the NESC QDP stakeholders, feedback from 23 stakeholder respondents in the 2012 *NESC BIT Offsite Communications Report* was used to gain insight into associated collaborative processes and relationships among stakeholders. The feedback was specifically examined for any identified barriers and enablers to productivity within the NESC, which were then compared to the existing ICC model key design factors and sub-factors of Hocevar et al.’s ICC assessment. This feedback is discussed in further detail in Chapter IV, Section B, NESC Barriers and Enablers to Productivity.

## **2. ICC Assessment Audience**

While future research may adjust the ICC Assessment to apply to expanded organizational audiences within the NESC scope, this initial assessment will only address QDP forum stakeholders as a jumping-off point for collaborative capacity among the NESC and associated organizations that work in mutual effort to supply trained sailors to the Fleet. As previously listed in Chapter II, Section B, paragraph 1 of this thesis, NESC QDP forum stakeholders and respective organizations include N10, N12, N13, BP-32, PERS-40, NRC, NETC, NSTC, USFF, CPF, OPNAV N095, BP-6, OPNAV N95, OPNAV N96, OPNAV N97, OPNAV N98, and OPNAV N2/N6. The breadth of attendees participating in the QDP forum may change from time to time, due to a variety of circumstances, requirements, and reorganizations. However, any attendee of a QDP forum who is extended the opportunity of participation and input concerning NESC interests, should likewise be extended the opportunity to participate in the ICC

assessment. Scribes, administrative assistants, or other outside observers to NESC QDP forum that would not be expected to offer input to the quarterly supply chain discussion, should not participate in the ICC assessment.

### **3. ICC Diagnostic Application to NESC QDP Stakeholders**

A certain level of inter-organizational collaborative capacity inherently exists when organizations share a need to work together to achieve a common goal. Gray referred to this as the “town meeting concept,” a democratic process where “town meetings turn on the principles of local participation and ownership of decisions” and collaboration “reflects a resurgence of interest in those fundamental principles” (Gray, 1991, p. 6). Likewise, the Inter-Organizational Collaborative Capacity Model asserts that “building collaborative capacity requires deliberate leadership attention and the alignment of organizational design elements toward collaboration” (Hocevar et al., 2012, p. 3). While the NESC hosts some innate collaborative capacity by virtue of its interdependent structure, building and amplifying inter-organizational collaborative capacity requires active participation by QDP stakeholders in order to realize and capitalize on that existing potential for collaborative growth. The 2012 *NESC BIT Offsite Communications Report* was an important first step in QDP stakeholder active participation, documenting perceived barriers and enablers within the NESC construct that could be linked and categorized under the 13 key organizational factors and respective domains of the ICC assessment discussed in this thesis.

It is important to note that the purpose of the BIT Offsite survey was “to establish a baseline for [NESC] awareness regarding communication, metrics and tools that will inform strategic planning in the near term” (NESC BIT, 2012, p. 1). The BIT Offsite survey’s purpose was not to specifically measure collaboration; however, its questions yielded responses that directly correspond with key collaborative factors contained in the five ICC model organizational domains, which are discussed in detail in Chapter IV, Section B, NESC Barriers and Enablers to Productivity.

## **C. RESEARCH METHODS EMPLOYED**

### **1. Archival Information Analysis**

Archival information analysis for this thesis is based upon original ICC model and assessment research, various NESC training resources, planning and execution documentation from NESC forums, the *NESC BIT Offsite Communications Report*, and authoritative texts on organizational collaboration and survey design and methodology. Supply chain and stakeholder interdependency mappings were studied, current and persistent supply chain challenges examined, and a review of an informal NESC organization self-assessment conducted, in order to inform a comprehensively tailored ICC assessment for the QDP forum stakeholders.

One of the most informing documents, the *NESC BIT Offsite Communications Report*, displayed decisive effort by the BIT to provide a starting point and confirmation of a need for improved strategic communication and collaboration among NESC Organizations. The report documented the results of an online survey, open to various high-level NESC personnel and was conducted from September 17–19, 2012 (NESC BIT, 2012, p. 1). Approximately 40 percent of the eligible participants responded (23 total respondents; NESC BIT, 2012, p. 1). Ultimately, the BIT Communications Report survey provided highly valuable NESC subject matter expert (SME) insight, to both validate the 13 ICC factors and to enable appropriate tailoring of survey questions to the QDP forum stakeholders context.

### **2. Assessment Validity**

Tailoring of the ICC Assessment was performed with cognizance for maintaining previously established validity. Hocevar et al.'s (2012a) *Codebook of Scales* for the ICC assessment demonstrated acceptable to very good internal consistency, bearing an alpha of 0.73–0.89 across all ICC factor scales (pp. 1–4). Questions were tailored in this thesis only to ensure they would maintain consistent implication to all respondents in the NESC QDP forum, and at least three questions were maintained for each ICC assessment sub-factor measure in order to preserve previously established acceptable to high ranges of internal consistency reliability (Fowler, 2002, pp. 101–102). A few questions were added

under Collaboration Structures and Collaborative Tools and Technologies to capture inter-organizational collaborative capacity both during the QDP forum, and outside the QDP forum in day-to-day activities. With the exception of demographic response alternatives tailored to the applicability of the NESC, response alternatives for ICC assessment sub-factors were not changed, maintaining unidimensional and monotonic characteristics of the original ICC Assessment questions (Fowler, 2002, p. 101). Recalculations of reliability should be addressed in future research when data has been collected from NESC QDP forum participants.

### **3. Instrumentation**

The ICC assessment response categories are Likert-type, with numeric ratings of 1–7 ranging from “Strongly Disagree” (“1”) to “Strongly Agree” (“6”), with 7 providing a “Don’t Know” option for respondents (Hocevar et al., 2012b, p. 6). Though titles are not assigned to numeric categories 2 through 5, their placements between “Strongly Disagree” and “Strongly Agree” provide an opportunity for respondents to express the degree to which they agree or disagree along that spectrum (Hocevar et al., 2012b, p. 6). There is not a purely neutral response provided; respondents must choose between slightly leaning toward disagreement, or slightly leaning toward agreement for each statement in the assessment.

### **D. SCOPE AND LIMITATIONS**

This thesis serves as the foundational design for future research of collaborative capacity in the NESC and produces the following deliverables: Background research and application of the ICC model and assessment to NESC contexts, proposed survey participants, survey introductory letter to participants, and the NESC QDP Inter-Organizational Collaborative Survey (tailored specifically for collaborative capacity contexts of the NESC QDP forum). No data are collected in this thesis.

## **IV. FINDINGS AND ANALYSIS**

In Chapter III, Research Design, three research questions were identified in order to best facilitate tailoring the ICC Assessment to the NESC QDP forum and to design a data collection plan:

1. Who are the NESC QDP forum stakeholders (organizations)?
2. What are the key areas of interdependence between and among the NESC QDP forum organizations?
3. How can we best tailor the ICC Assessment to identify points of leverage in the NESC QDP forum where improved collaboration could best affect efficiency and productivity?

In Section D, The QDP Process, in Chapter II, the NESC QDP forum process stakeholders (organizations) are listed, answering question 1. In Section G of the same chapter, the key areas of interdependence between and among these organizations are detailed, answering question 2. The remaining question 3, “How can we best tailor the ICC Assessment...?” is addressed in this chapter, Section D, Tailoring the NESC QDP ICC Assessment.

Prior to discussing the tailoring of the assessment, this chapter explains the applicability of the ICC assessment to the NESC via an examination of NESC barriers and enablers to productivity. This chapter also observes the importance of assessing collaborative capacity in the NESC, leading into the proposed NESC QDP Assessment changes. Finally, this chapter briefly addresses considerations for bias that have the potential of affecting assessment responses.

### **A. ICC ASSESSMENT AND NESC APPLICABILITY**

The Key Findings of the *NESC BIT Offsite Communications Report* (September 17–19, 2012) yielded responses from 23 participants that closely align with the 13 detailed ICC Assessment collaborative capacity factors previously presented in this thesis. This factor alignment signals the potential that an ICC Assessment with language

tailored to the NESC context, would lend itself well to measuring NESC collaborative capacity.

## **B. NESC BARRIERS AND ENABLERS TO PRODUCTIVITY**

In this section, responses in the 2012 *NESC BIT Offsite Communications Report* are analyzed for perceived barriers and enablers to NESC communication. Answers to the questions posed in the BIT Offsite report which yielded identifiable barriers and enablers, were categorized according to corresponding ICC Assessment Factors. In most cases, the answers aligned with the key organizational factors and domains expected because of the natures of the respective questions being asked. In some cases, however, answers did not align with the specific organizational factor and domains expected, but did fall under at least one organizational factor/domain of the ICC Assessment elsewhere. All barriers and enablers identified in the BIT Offsite report fit into the ICC model's organizational domain construct. A visual summary of *NESC BIT Offsite Communications Report* alignment with ICC Assessment Factors may be found at the end of this section in Table 2. No additional key organizational factors or domains to those already established in the ICC model were found to be necessary to account for perceived collaborative barriers or enablers in the NESC, as identified in the BIT Offsite report.

### **1. *NESC BIT Offsite Communications Report*—Roles and Responsibilities**

In the opening Key Findings of the *NESC BIT Offsite Communications Report* under Roles and Responsibilities, the respondents envision production line managers (PLMs) as “coordination specialists,” “drivers,” “smart facilitators,” “liaisons between all [NESC] stakeholders,” “balancers,” “integrators,” “honest brokers,” “coordination specialists,” and better informants to programming (NESC BIT, 2012, pp. 3–4). The language of the respondents demonstrates a “felt need to collaborate” across the NESC; urgency for strategic action for collaboration through proactive, balanced, and thoughtful facilitation; and a desire for information sharing, individual collaboration effort support, and collaborative structures via designated collaborative specialists that could liaise and unify organizational missions. When asked how stakeholders “envision the Production



Line Managers assisting [them] in [their] efforts,” respondents expressed that PLMs would assist in bringing “good, aligned and rationalized” data to a central location, help them “see the supply chain from end to end”, and assist key stakeholders in being more proactive, vice reactive, managers of the supply chain (NESC BIT, 2012, p. 3–4). One respondent expressed a hope for PLMs to “work those issues that fall between the seams of our organizations,” signaling weak or absent means of dealing with issues that arise at critical handoff points between organizations in the NESC (NESC BIT, 2012, p. 3). Another point made by a respondent, stated that the PLMs could likely be expected to permit “true requirements ... [to be] briefed to leadership for funding decisions” (NESC BIT, 2012, p. 4) The whole of the section’s language illustrated an (resource) investment in PLMs to promote collaborative structural flexibility, stoke social capital, and promote information sharing, to mitigate shortfalls in individual collaborative capabilities.

## **2. *NESC BIT Offsite Communications Report—Knowledge, Information, Communications, and Tools***

In the next section of the *NESC BIT Offsite Communications Report—Knowledge, Information, Communications, and Tools*—respondents expressed what information they wish they had known on their very first day in their current NESC assignment, with comments such as, “Organizational structure of each stakeholder and how each person in that organization could help me do my job,” “how everything works together,” and “I believed we were better aligned than we are” (NESC BIT, 2012, pp. 4–5). Additionally, responses to the section reiterated the need for information sharing, with consistent themes across multiple responses including a need for information regarding NESC processes and policies, positions and roles of NESC stakeholders, supply chain relationships from “requirements determination to ... distribution,” and drivers and origins of various supply chain requirements and quotas (NESC BIT, 2012, pp. 4–5). Responses to this particular question evoked a strong awareness of time lost to trying to understand the complex processes and structure of the NESC, suggesting the importance of developing social capital, collaborative structures, and individual collaborative capacity to withstand the momentous challenges of the NESC.

This section of the *NESC BIT Offsite Communications Report* also asks respondents if there was a “metric, tool or process [they] would like to have to help [them] in [their] role” in the NESC (NESC BIT, 2012, p. 5). A flow chart of NESC stakeholders is mentioned once in this section, supporting earlier expressed desires to understand and perpetuate supply chain collaboration through collaborative learning and tools (NESC BIT, 2012, pp. 5–6). Additionally, some respondents expressed a need for metrics and tools to increase their visibility on other NESC entities’ timing, capacities, and outputs (NESC BIT, 2012, pp. 5–6). This language pointed to the utility of increased resource investment for collaborative learning (training and information sharing), strategic action for collaboration and collaborative structures that would facilitate such learning, and collaborative tools and technologies that could manage and information-share complex systems of NESC data comprehensively, across multiple organizations.

### **3. *NESC BIT Offsite Communications Report*—Communication Effectiveness**

The *NESC BIT Offsite Communications Report* polled respondents to reveal how effective their respective organization communicates with the Planning and Execution function of the NESC. Of 23 respondents, one (4%) felt their organization was “Not effective,” five (22%) felt their organization was “Somewhat effective,” six (26%) were “Neutral,” five (22%) felt their organization was “Effective,” and only four (17%) respondents felt their organization was “Extremely effective” when communicating within the NESC (NESC BIT, 2012, p. 8). Two respondents did not reply (NESC BIT, 2012, p. 8). The *NESC BIT Offsite Communications Report* then asked respondents “what organization(s) do [they] think communicate(s) well within the NESC (Planning and Execution)” and “what is it about the way they communicate that work[s] so well?” (NESC BIT, 2012, p. 8). PMO led respondent votes for best communicator, where perceived effective communication was attributed to “constant and wide reaching effort,” “regularly scheduled/recurring meetings,” “metrics,” “daily interaction doing our jobs,” “constantly working one on one to solve issues and work through problems,” an “established aggressive reach out and touch program,” and “organizations work[ing] together and develop[ing] better communication” (NESC BIT, 2012, pp. 8–9). Beyond

these elements of collective and conscientious organizational effort and consistency in communication and interaction (often via mass distribution and large email attachments), a couple of responses mention that straightforward responses and taking the time to explain what they do as a stakeholder and organization are an important part of communication among NESC organizations (NESC BIT, 2012, pp. 8–9). This section demonstrated direct appreciation for strategic action for collaboration, information sharing, social capital, collaborative learning, support for individual collaborative efforts, and the collaborative structure in place (PMO) to facilitate NESC collaboration. CFT leads were mentioned as catalysts and feedback resources that “work together and develop better communication sharing beyond the CFT areas alone... breed[ing] collaboration” (NESC BIT, 2012, p. 9). This insight pointed to CFT function as NESC collaboration resource investments, assisting in bridging gaps in individual collaborative capability across the NESC. The whole of the section reiterated a resounding “felt need” to collaborate among NESC organizations.

#### **4. *NESC BIT Offsite Communications Report*—NESC Perceived Strengths/Weaknesses and Brand Descriptors**

The appendix of the *NESC BIT Offsite Communications Report* documents respondents’ current (2013) perceived strengths and weaknesses of the NESC (2012, pp. 13–14). Documented strengths in the report reveal collaborative themes with words like “reconcile,” “integration,” “communication,” “aligned efforts,” and the actual word “collaboration” (NESC BIT, 2012, pp. 13–14). Phrases like “we all seem to know we are in this together ... shared burden ... shared rewards,” “getting to understand better what influences/impacts what,” and “more people understanding how their stovepipe impacts others” exhibit an empathy among respondents and an acknowledgement of shared incentive and reward utility in collaboration (NESC BIT, 2012, pp. 13–14). Alternately, concerns of organizational weakness revolve around words like “stovepipes,” and phrases that indicate losses or lacks of organizational momentum, communication, understanding, and leadership involvement (NESC BIT, 2012, pp. 13–14). Phrases include “non-communications,” “lack of [organizational] involvement,” weakness of “understanding capacity,” weakness in “decisions across enterprise lines,” “not all stakeholders have

same level of commitment,” and even “inability of stakeholders to devote attention” (NESC BIT, 2012, pp. 9–14). The language in the weaknesses portion of this section communicates deficits in structural flexibility, individual collaborative capabilities, strategic action for collaboration, collaborative structures, support for individual collaborative efforts, social capital, and information sharing. One respondent expressed a frustration for “people who think they ‘get it’ but don’t,” further reiterating potential shortcomings in collaborative learning, social capital, and/or individual collaborative capabilities (NESC BIT, 2012, pp. 13–14). The strengths of this section mentioned some organizational alignment improvements, planning and support tools strengths (collaborative tools and technologies), “trying to be more collaborative,” “realization of barriers,” and other language indicating a willingness and value for NESC integration, coordination, and largely, a felt need to collaborate (NESC BIT, 2012, pp. 13–14).

##### **5. *NESC BIT Offsite Communications Report—A Note on Social Capital***

Intermittently throughout the respondents’ feedback in the *NESC BIT Offsite Communications Report*, the importance of developed social capital is evident. One particular quote, originating from the question about what information would have been useful from day one, alludes to the particular value of relationships that had been built by incumbent organizational leadership over time and that would not have been possible for a new entrant to the position to establish automatically (NESC BIT, 2012, p. 4). This social capital dynamic is further referred to as “relationships that exist in planning nodes,” “points of contact,” and “well established series of communications” in other areas of response in the report (NESC BIT, 2012, pp. 4–8). One respondent simply stated, “Relationships matter and breed collaboration” (NESC BIT, 2012, p. 9). These responses reflect a clear felt need to collaborate and allude to the importance of a healthy collaboration structure, strategic action for collaboration, and development of individual collaborative capabilities when high turnover of leadership, and consequently, a high potential for diminishing social capital, in organizations is inherent. An absence of a sturdy collaboration structure and strategy for collaboration in a high turnover environment could quickly translate to decay in the social capital necessary to bridge the gap at critical handoff points between NESC organizations.

Table 2. ICC Assessment and NESC Applicability

ICC Assessment and NESC Applicability												
ICC Assessment Factors												
NESC BIT Offsite Communications Report	"Felt Need to Collaborate"	"Strategic Action for Collaboration"	"Resource Investments"	"Incentives & Reward Systems"	"Structural Flexibility"	"Support for Individual Collaborative Efforts"	"Metrics"	"Collaboration Structures"	"Collaborative Learning"	"Collaborative Tools & Technologies"	"Social Capital"	"Information Sharing"
"Roles and Responsibilities"	X	X	X		X	X		X			X	X
"Knowledge, Information, Communications, and Tools"	X	X	X				X	X	X	X	X	X
"Communication Effectiveness"	X	X	X			X	X	X	X		X	X
"NESC Perceived Strengths/Weaknesses and Brand Descriptors"	X	X		X	X	X		X	X	X	X	X

Adapted from: Hocevar et al., 2012b, May 1. *Inter-Organizational Collaborative Capacity (ICC) Assessment*. Monterey, CA: Naval Postgraduate School, p. 3; NESC BIT, 2012, September 17-19. *Navy enlisted supply chain: BIT offsite communications report*. Millington, TN: Production Management Office Business Improvement Team, pp. 3–10.

### C. THE IMPORTANCE OF ASSESSING COLLABORATIVE CAPACITY IN THE NESC

Timely and effective communication is essential to combatting a wide range of challenges in complex organizations. Establishing a structure and systems that encourage collaboration can create consistent networks of information flow that harbor timely and effective communication across an organization. In such positions where management turnover is frequent and the complexity of the processes and supply chain relationships are extensive, comprehensive collaboration is essential to minimizing lost time to changing leadership. Time lost to misunderstandings and inefficient information flow can translate to lost opportunities and ultimately, lost dollars.

In the *NESC BIT Offsite Communications Report*, many concerns from respondents echoed a need to be more comprehensively connected with other NESC organizations with regard to communications and a better understanding of, and working

relationship with, one another. In some cases, respondents were in receipt of, or responsible for, a critical handoff from/to a direct counterpart in the chain and were seeking to be more informed on that process. In other cases, respondents wished to better understand what and how their organization's product(s) contributed to the overall mission of the NESC. The high turnover of military leadership further emphasizes the need for an established collaborative infrastructure in the NESC in order to support a more comprehensive network amongst NESC organizations. An improved collaborative structure would support and perpetuate best business practices throughout frequent leadership changes, and could grow and evolve with the structural and operational complexities of the organization over time.

Of note, Table 2 reflects a relatively weak realization of “incentives and rewards systems” for collaboration within the NESC compared to other ICC assessment factors results shown in the table. A formal assessment of incentives and rewards systems in the NESC via the tailored ICC Assessment could reveal large opportunities for collaborative capacity improvement alone. In whole, the *NESC BIT Offsite Communications Report* respondent data reflected a strong relationship to ICC assessment factors established by Hocevar et al., illustrating a highly favorable propensity for the tailored ICC assessment to yield useful feedback on NESC collaborative capacity.

## **D. TAILORING THE NESC QDP ICC ASSESSMENT**

### **1. Intended Audience**

The ICC Assessment has been tailored to the QDP forum stakeholders, as listed in Chapter II, Section D, with the intent that QDP stakeholders will offer insight on NESC collaborative capacity from their respective stakeholder perspectives. The survey should exclude scribes and any observers not expected to actively engage in QDP forum discussion and decision-making. The survey should be administered for a single QDP Conference to gather collaborative capacity data within the NESC at that point in time.

## 2. Question Tailoring to NESC (QDP Forum) Audience

General phrase substitutions used in tailoring the QDP stakeholder ICC Assessment questions are summarized in Table 3. Questions were tailored in order to recognize QDP stakeholders not only as QDP forum participants, but also as NESC organization participants in day-to-day functions. As previously discussed, the QDP forum stakeholders work in concert to consider cost, supply, demand, attrition, and capacities in constructing a feasible production execution plan that will result in the required volume of sailors to the Fleet (NEASC BIT, 2013, slide 48). The QDP Stakeholder ICC Assessment observes the collaborative capacity within this symbiotic construct, as periodic QDP forums sustain and cultivate NESC day-to-day activity.

Table 3. General Rules for Tailoring the QDP Stakeholder ICC Assessment

<b>ORIGINAL PHRASING IN ICC ASSESSMENT</b>	<b>TAILORED PHRASING FOR ICC QDP STAKEHOLDER CONTEXT</b>
“my organization”	“my NESC organization”
“other organizations”	“other organizations in the QDP forum” (reference specific to QDP forum)
“other organizations”	“other organizations in the NESC” (reference not specific to QDP forum)

“Rewards and Incentives” QDP Stakeholder ICC Assessment questions were tailored, as appropriate, to reference the annual and biannual performance reviews for Naval officers (fitness reports, or FITREPs), and associated civilian performance systems for civilian personnel. These reviews function as the primary means of documenting officer and civilian job performance assessment for promotion and reward opportunities.

## 3. Context and Demographics Tailoring

The original ICC model was designed with the intent to gain collaborative capacity insight into organizations for which no previous contextual or demographic knowledge had been collected or maintained. Three of the questions in the “Context and Demographics” section have been omitted for the NESC QDP Stakeholder ICC

Assessment. The omission of these questions, as well as edits to remaining questions, may be viewed in Table 4. If a larger sample size of NESC organizations is considered for survey in future studies, survey tailoring considerations should include bringing some or all of the original “Context and Demographics” questions back into the survey, restoring the questions to their original wording, and/or editing original wording to best fit a new audience; judicious survey tailoring will ensure the creation of an accurate collaborative picture of the organization(s) involved. A short explanation of each demographic question deletion for the NESC QDP Stakeholder ICC Assessment follows (the following questions, a. through c., are taken directly from Hocevar et al., 2012b, p. 11):

***a. “How Long Has Your Organization Been Involved in Inter-Organization Collaborations?”***

It could be argued that the Navy has been planning to meet end strength in some capacity, since its inception. For the purposes of this thesis however, and to eliminate error in a variety of responses, the QDP BIT establishment in November 2010 will be used as the “beginning” of efforts toward active collaboration across the NESC and in the QDP forum.

***b. “For What Organization Do You Work?”***

This question, combined with a small sample size consisting of QDP stakeholders (17 expected respondents) runs the risk of identifying individuals within the QDP, and therefore, runs the risk of discouraging candid and honest responses. This dynamic, in turn, would reduce the validity of survey results. In order to preserve feedback quality, this question was removed from the assessment.

***c. “How Often Does Your Organization Participate in Formal Inter-Organizational Meetings?”***

For the purposes of the NESC QDP Stakeholder ICC Assessment, the QDP stakeholders meet quarterly, and QDP BIT members meet monthly; some QDP stakeholders may also be QDP BIT members.



Table 4. Context and Demographics

CONTEXT AND DEMOGRAPHICS		
ORIGINAL QUESTION	SUGGESTED ACTION	TAILORED RESPONSE BANK
“My organization has a history of working well with other organizations?”	My NESC organization has a history of working well with other NESC organizations.	Strongly Disagree (1) through Strongly Agree (6), Don’t Know (7)
“How long has your organization been involved in inter-organization collaborations?”	(REMOVE)	N/A
“How would you rate the overall success of your organization in collaborating with other organizations?”	How would you rate the overall success of your NESC organization in collaborating with other NESC organizations?	Very Poor (1) to Excellent (6), Don’t Know (7)
“How many people are employed by the unit or organization that you have been thinking about in answering these questions?”	How many people are employed by the NESC organization that you have been thinking about in answering these questions?	0-300, 301–500, 501–1000, 1001–2000, 2001+, Don’t Know
“What percentage of your work week is spent doing inter-organizational work?”	What percentage of your work week is spent doing inter-organizational work?	0%, 0–25%, 25–50%, 50–75%, 75–100%
“How many years have you worked for the unit OR organization you have been thinking about in answering these questions?”	How many years have you worked for the NESC organization you have been thinking about in answering these questions?	<1 year, 1–2 years, 2–3 years, 3–4 years, 5+ years
“How many inter-organizational teams are you currently on?”	How many inter-organizational teams are you currently on? This may include other military collaborative inter-organizational teams not directly related to the NESC. (Ex: QDP BIT, Board of Directors, MMOWGLI participant, etc.)	1, 2, 3, 4, 5, 6, 7+

ORIGINAL QUESTION (continued)	SUGGESTED ACTION (continued)	TAILORED RESPONSE BANK (continued)
“For what organization do you work?”	(REMOVE)	N/A
“How high is the risk if inter-organizational coordination is not effective?”	How high is the risk if inter-organizational NESC coordination is not effective?	Insignificant (1), to Very Significant (6), Don’t Know (7)
“How often does your organization participate in formal inter-organizational meetings?”	(REMOVE)	N/A

Adapted from: Hocevar et al., 2012b, May 1. *Inter-Organizational Collaborative Capacity (ICC) Assessment*. Monterey, CA: Naval Postgraduate School, p. 11.

#### **4. Arrangement of the Assessment Questions**

The question order in the tailored ICC assessment is maintained in the same order of presentation as the original ICC assessment by Hocevar et al. (see Appendix C). Structural integrity of the original ICC assessment is preserved to maintain methodical considerations by the ICC assessment authors. For example, “Felt Need” is presented first in the original ICC assessment because “Felt Need to collaborate is typically the initiating factor” in building collaborative capacity (Hocevar et al., 2012b, p. 4). The original structure of the ICC assessment therefore relates a logical survey flow for the QDP forum stakeholders, and is maintained.

#### **5. Proposed NESC QDP ICC Assessment Changes**

Primarily, this thesis validates organizational domains and factors of the ICC model with respect to the collaboration of the NESC Quarterly Demand Process (QDP) forum stakeholders ensuring that the language and questions within the ICC Assessment will best elicit the accuracy of feedback desired for that particular contextual application. This thesis not only adapts the organizational domains and factors of the ICC model with respect to the NESC (see Table 5), but also examines the potential for additional

collaboration factors relevant to the NESC that could affect the accuracy and completeness of future NESC organizational assessment(s).

Table 5. Proposed NESC QDP BIT ICC Assessment Survey

<b>FELT NEED TO COLLABORATE</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“Effective inter-organizational collaboration is a high priority for my organization.”	Effective inter-organizational collaboration with QDP stakeholders is a high priority for my NESC organization. <sup>3</sup>
“My organization recognizes the importance of working with other organizations to achieve its mission.”	My NESC organization recognizes the importance of working with other organizations in the QDP forum to achieve its mission.
“Members of my organization understand the benefits of collaborating with other organizations.”	Members of my NESC organization understand the benefits of collaborating with other organizations in the NESC.
“There is agreement within my organization about the purpose and value of inter-organizational collaboration.”	There is agreement within my NESC organization about the purpose and value of inter-organizational collaboration in the QDP forum.
“The success of my organization’s mission requires working effectively with other organizations.”	The success of my NESC organization’s mission requires working effectively with other NESC organizations in the QDP forum.
<b>STRATEGIC ACTION FOR COLLABORATION</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“We have clearly established goals for inter-organizational collaboration.”	We have clearly established goals for NESC inter-organizational collaboration in the QDP forum.

<sup>3</sup> “My NESC organization” refers to a member’s respective organization/command within the NESC. For example, a member taking this survey who works at BUPERS-3 could read the question “Effective inter-organizational collaboration with QDP stakeholders is a high priority for my NESC organization” as “Effective inter-organizational collaboration with QDP stakeholders is a high priority for BUPERS-3.”

STRATEGIC ACTION FOR COLLABORATION (continued)	
ORIGINAL QUESTION	SUGGESTED ACTION
“The leaders of my organization emphasize the importance of inter-organizational collaboration.”	The leaders of my NESC organization emphasize the importance of inter-organizational collaboration in the QDP forum.
“My organization is willing to address inter-organizational goals even if it must compromise its own interests.”	My NESC organization is willing to address inter-organizational goals discussed in the QDP forum, even if it must compromise its own interests.
“My organization considers the interests of other organizations in its planning.”	My NESC organization considers the interests of other NESC organizations in its planning.
“Leaders of my organization work productively with those of other organizations to improve our collaborations.”	Leaders of my NESC organization work productively with those of other NESC organizations to improve our collaborations.
RESOURCE INVESTMENT IN COLLABORATION	
ORIGINAL QUESTION	SUGGESTED ACTION
“My organization has committed adequate budget, and resources to inter-organizational collaboration.”	My NESC organization has access to adequate budget and resources to conduct effective and efficient inter-organizational collaboration with other NESC organizations.
“My organization is willing to invest resources to accomplish inter-organizational goals.”	My NESC organization is willing to commit resources to accomplish NESC QDP forum inter-organizational goals.
“My organization has assigned adequate personnel to the work required for effective inter-organizational collaboration.”	My NESC organization has assigned adequate personnel to the work required for effective NESC inter-organizational collaboration.
STRUCTURAL FLEXIBILITY	
ORIGINAL QUESTION	SUGGESTED ACTION
“My organization can quickly form or modify partnerships as requirements change.”	(REMOVE) <i>Military members are not at leisure to choose partnerships; they must work together with leadership in place.</i>
“My organization is flexible in adapting its processes and procedures to better fit with other organizations.”	My NESC organization is flexible in adapting its processes and procedures to better fit with other NESC organizations.

<b>STRUCTURAL FLEXIBILITY (continued)</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
(NEW)	My NESC organization has the ability to de-conflict existing policies and processes that impede collaboration with other NESC organizations.
“My organization invests appropriate time and energy to deconflict existing policies and processes that impede collaboration.”	My NESC organization invests appropriate time and energy to de-conflict existing policies and processes that impede collaboration.
“My organization’s procedures are flexible and responsive to the requirements of other organizations.”	My NESC organization’s procedures are flexible and responsive to the requirements of other NESC organizations.
<b>METRICS FOR COLLABORATION</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
“My organization has measurement criteria to evaluate inter-organizational collaboration efforts.”	My NESC organization has measurement criteria to evaluate inter-organizational collaboration efforts with other NESC organizations.
“My organization has clear performance standards regarding inter-organizational work.”	My NESC organization has clear performance standards regarding inter-organizational work with other NESC organizations.
“My organization has measurement criteria to evaluate the outcomes of inter-organizational collaboration.”	My NESC organization has measurement criteria to evaluate the outcomes of inter-organizational collaboration with other NESC organizations.
<b>REWARDS AND INCENTIVES</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
“My organization rewards employees for investing time and energy to build collaborative relationships.”	My NESC organization rewards members for investing time and energy to build collaborative relationships with other NESC organizations.
“My organization rewards members for their successful inter-organizational collaborative activities.”	My NESC organization rewards members for their successful inter-organizational collaborative activities with other NESC organizations.
“Collaborative talents and achievements are considered when people are reviewed for promotion.”	Collaborative talents and achievements are considered when members are reviewed for annual and biannual evaluations.

<b>REWARDS AND INCENTIVES (continued)</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“Engaging in inter-organizational activities at work is important to career advancement.”	Engaging in inter-organizational activities with other NESC organizations at work is important to career advancement.
<b>COLLABORATIVE LEARNING</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“My organization commits adequate human and financial resources to training with other organizations.”	My NESC organization commits adequate human and financial resources to training with other NESC organizations.
“My organization has strong values and norms for learning from other organizations.”	My NESC organization has strong values and norms for learning from other NESC organizations.
“My organization works with other organizations to identify lessons learned for improved collaboration.”	My NESC organization works with other NESC organizations to identify lessons learned for improved collaboration.
“My organization understands how the other organizations we work with make decisions.”	My NESC organization understands how the other NESC organizations with whom we work, make decisions.
“My organization takes time to learn about the interests of stakeholder organizations.”	My NESC organization takes time to learn about the interests of other NESC stakeholder organizations.
<b>INFORMATION SHARING</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“My organization has strong values and norms that encourage sharing information with other organizations.”	My NESC organization has strong values and norms that encourage sharing information with other NESC organizations.
“My organization provides other organizations adequate access to information that is relevant to their work.”	My NESC organization provides other NESC organizations adequate access to information that is relevant to their work.
“Members of my organization willingly share information with other organizations.”	Members of my NESC organization willingly share information with other NESC organizations.

<b>SOCIAL CAPITAL</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“Members of my organization know who to contact in other organizations for information.”	Members of my NESC organization know who to contact in other NESC organizations for information.
“Members of my organization take the initiative to build relationships with their counterparts in other organizations.”	Members of my NESC organization take the initiative to build relationships with their counterparts in other NESC organizations.
“Members of my organization have strong networks of professional relationships with people in other organizations.”	Members of my NESC organization have strong networks of professional relationships with people in other NESC organizations.
<b>INDIVIDUAL COLLABORATIVE CAPACITIES</b>	
<b>ORIGINAL QUESTION</b>	<b>SUGGESTED ACTION</b>
“Members of my organization have the collaborative skills (e.g., conflict management, team process skills) needed to work effectively with other organizations.”	Members of my NESC organization have the collaborative skills (e.g., conflict management, team process skills) needed to work effectively with other NESC organizations.
“Members of my organization understand the capabilities of other organizations with which we work.”	Members of my NESC organization understand the capabilities of other NESC organizations with which we work.
“Members of my organization respect the expertise of those in other organizations with whom we work.”	Members of my NESC organization respect the expertise of those in other NESC organizations with whom we work.
“Members of my organization understand how our work relates to the work of other organizations with whom we need to collaborate.”	Members of my NESC organization understand how our work relates to the work of other NESC organizations with whom we need to collaborate.
“Members of my organization are able to appreciate another organization’s perspective on a problem or course of action.”	Members of my NESC organization are able to appreciate another NESC organization’s perspective on a problem or course of action.
“Members of my organization are willing to engage in a shared decision making process with other organizations.”	Members of my NESC organization are willing to engage in a shared decision making process with other NESC organizations.



<b>INDIVIDUAL COLLABORATIVE CAPACITIES (continued)</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
“Members of my organization seek input from other organizations.”	Members of my NESC organization seek input from other NESC organizations.
<b>SUPPORT FOR INDIVIDUAL COLLABORATION EFFORTS</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
“Leadership listens to input from subordinates about ways to improve inter-organizational collaboration.”	Leadership of my NESC organization listens to input from subordinates about ways to improve NESC inter-organizational collaboration.
“My organization gives people the authority they need to effectively collaborate with other organizations.”	My NESC organization gives people the authority they need to effectively collaborate with other NESC organizations.
“My organization follows through on recommendations from our representatives on inter-organizational task forces.”	My NESC organization follows through on collaboration recommendations from PMO.
“People are given clear guidance on goals and constraints for their inter-organizational work.”	Members of my NESC organization are given clear guidance on goals and constraints for their inter-organizational work with other NESC organizations.
<b>COLLABORATION STRUCTURES</b>	
ORIGINAL QUESTION	SUGGESTED ACTION
“My organization has adequate and appropriate structures (e.g., liaison roles, teams, task forces) for effective inter-organizational collaboration.”	My NESC organization has adequate and appropriate structures (e.g., liaison roles, teams, task forces) for effective inter-organizational collaboration <u>during</u> NESC QDP forum meetings.
(NEW)	My NESC organization has adequate and appropriate structures (e.g., liaison roles, teams, task forces) for effective inter-organizational collaboration with NESC organizations <u>outside</u> of QDP forum meetings.
“My organization establishes specific agreements about each organization’s roles and responsibilities in collaboration.”	My NESC organization establishes specific agreements about each NESC organization’s roles and responsibilities in collaboration <u>during</u> QDP forum meetings.



COLLABORATION STRUCTURES (continued)	
ORIGINAL QUESTION	SUGGESTED ACTION
(NEW)	My NESC organization establishes specific agreements about each NESC organization's roles and responsibilities for collaboration <u>outside</u> of QDP forum meetings.
"My organization's processes and procedures are structured to enable effective inter-organizational collaboration."	My NESC organization's processes and procedures are structured to enable effective inter-organizational collaboration with other NESC organizations <u>during</u> QDP forum meetings.
(NEW)	My NESC organization's processes and procedures are structured to enable effective inter-organizational collaboration with other NESC organizations <u>outside</u> of QDP forum meetings.
COLLABORATIVE TOOLS AND TECHNOLOGIES	
ORIGINAL QUESTION	SUGGESTED ACTION
"Our inter-organizational collaborations are effectively supported by collaborative planning tools and technologies."	Our NESC inter-organizational collaborations are effectively supported by collaborative planning tools and technologies <u>during</u> QDP forum meetings.
(NEW)	Our NESC inter-organizational collaborations are effectively supported by collaborative planning tools and technologies <u>outside of</u> QDP forum meetings.
"My organization has the necessary information systems' inter-operability to enable effective inter-organizational collaboration."	My NESC organization has the necessary information systems' inter-operability to enable effective inter-organizational collaboration with other NESC organizations <u>during</u> QDP forum meetings.
(NEW)	My NESC organization has the necessary information systems' inter-operability to enable effective inter-organizational collaboration with other NESC organizations <u>outside of</u> QDP forum meetings.

COLLABORATIVE TOOLS AND TECHNOLOGIES (continued)	
ORIGINAL QUESTION	SUGGESTED ACTION
“Our inter-organizational collaborations are supported by effective communication tools and technologies.”	Our inter-organizational collaborations with other NESC organizations are supported by effective communication tools and technologies <u>during</u> QDP forum meetings.
(NEW)	Our inter-organizational collaborations with other NESC organizations are supported by effective communication tools and technologies <u>outside of</u> QDP forum meetings.

Adapted from: Hocevar et al., 2012b, May 1. *Inter-Organizational Collaborative Capacity (ICC) Assessment*. Monterey, CA: Naval Postgraduate School, pp. 6–10.

## 6. CONSIDERATIONS FOR BIAS

The ICC assessment yields a single-organization perspective from respondents concerning collaborative capacity in their own organizations. Respondents being asked to provide input concerning their own organization’s capabilities may potentially lead to respondents erring on the side of favor for their own organization. By contrast, the assessment may likely face similar effects if it were reworded to query respondents about other organizations, as it may be easier for respondents to be more critical of other organizations than their own; rewording the questions, therefore, may not necessarily solve bias, but may simply redirect it. To address any such tendency for bias in this survey, the opening directions for completing the survey should acknowledge potential respondent concerns, reassure the respondents of anonymity, and encourage the respondents to complete the survey candidly in order to provide the best picture of collaborative capacity for benefit of the whole of the NESC.

## **V. CONCLUSIONS AND RECOMMENDATIONS**

The ICC assessment, tailored for administration to the NESC QDP forum stakeholders, offers a tangible way to gain insight into the collaborative capacity of the NESC. The QDP forum holds an ideal audience for ICC assessment introduction to the NESC because of its varied but generally consistent organizational composition and its decisive role as a NESC network for collaboration. Furthermore, its regular conference scheduling will aid in constructing a baseline understanding of QDP stakeholder organizational collaborative capacity. A complex marriage of round-table (QDP) and linear (supply chain) organizational interdependence (reciprocal, and pooled and sequential interdependence, respectively) in the NESC is challenged by a dynamic operational tempo, consistent leadership turnover, and a diverse range of external and internal influences to production. Open and candid collaborative discussions within the NESC are essential to informing the supply chain in QDP and BIT roundtable planning and in promoting proactive and prudent application of levers and meters throughout supply chain linear execution. Such collaborative interaction progressively indicates levers that must be adjusted to enact necessary change(s), and/or meters that are (or are not) producing useful feedback to production processes.

The ICC model and assessment reflect and address factors found in the QDP forum and NESC constructs with no new factors identified, lending themselves well to the methodical analysis of gaps in collaborative capacity of the NESC. The final version tailored to the NESC QDP stakeholders may be found in Appendix C. Feedback from the ICC assessment will provide a formal foundational understanding of enablers and barriers to production in the QDP forum and NESC, permitting collaboration course adjustments to be made in planning phases and when considering adjustment of supply chain levers and meters in execution phases, improving overall NESC effectiveness and efficiency. Subsequent ICC assessments may be administered to monitor changes in QDP forum and NESC collaborative capacity over time. Conceivably, the ICC assessment could be further tailored and scaled up or down in future research to assess NESC organizational collaboration on a more expansive scale, or to assess any part or whole of the MPT&E

supply chain group desired. The ICC assessment ultimately provides a way ahead for creating collaborative network awareness in the NESC and cultivating a culture of best-business practices in alignment with the CNP's NESC Vision and Concept of Operations.

## **APPENDIX A. GENERAL SURVEY PREPARATION AND PROCEDURE**

### **A. INTRODUCTORY LETTER**

This letter serves as the invitation for participation in the QDP forum stakeholder ICC assessment (See Appendix B).

### **B. SURVEY PARTICIPANTS**

The QDP forum stakeholder ICC assessment participants should include all NESC stakeholders (N10, N12, N13, BP-32, NRC, NETC, NSTC, USFF, CPF, N095, BP-6, OPNAV N95, OPNAV N96, OPNAV N97, OPNAV N98, OPNAV N2/N6), convening to engage in active panel discussion at the QDP conference, but should exclude scribes and any observers not expected to actively engage in QDP forum discussion and decision-making. The assessment should be administered for a single QDP forum conference to gather collaborative capacity data within the NESC at that point in time (a three-day assessment completion period is suggested). The ICC assessment should be administered annually, but no more often than biannually, to establish a consistent record of QDP forum stakeholder collaborative capacity.

### **C. TAILORED ICC SURVEY**

This is the final, tailored QDP Stakeholder ICC Assessment (See Appendix C).

### **D. GENERAL SURVEY ADMINISTRATION PROCEDURE**

Steps adapted from Rosenfeld et al., pp. 13–23:

1. Obtain Organizational Approval of tailored ICC Assessment (this thesis)
2. Select Respondents according to most up-to-date NESC QDP forum participant muster
3. Complete Institutional Review Board (IRB)
4. Prepare/Distribute and Administer Survey

5. Await Returns of Survey
6. Enter and Verify Data
7. Run the Analyses and Interpret the Results
8. Present Findings

## APPENDIX B. SURVEY INTRODUCTORY LETTER



(DD MMM YYYY)

Dear QDP Stakeholder:

As you well know, the Navy Enlisted Supply Chain (NESC) is one of the most complex operational processes within the US Navy. Exceptional coordination, planning, and perpetual reassessment are requisite in ensuring the NESC operates effectively to attain mission achievement.

The Business Improvement Team (BIT) was chartered on the principle of promoting a culture of collaboration among NESC stakeholders and for facilitating a proactive forum for improving supply chain efficacy and efficiency by actively removing barriers to productivity throughout NESC processes. The Inter-Organizational Collaborative Capacity (ICC) assessment you are being asked to complete will establish the official quantitative baseline necessary for observing, measuring, and ultimately improving NESC collaborative networks over time. Your participation is particularly essential to ensuring all NESC organizations are represented in this assessment.

The information collected in this assessment is vital to accurately mapping current collaborative capacity in the NESC in order to amplify the potential for future collaborative success. Please answer questions candidly, as your honest and thoughtful responses will become the reference point data for how collaboration is currently understood to exist in the NESC. Please also rest assured that your anonymity is of the utmost importance to us; every effort to better understand the collaborative capacity of the NESC has been made with due consideration for maintaining the strict privacy of all respondents.

**Your participation is sincerely appreciated. Thank you!**

(FIRST LAST), Graduate Student  
Naval Postgraduate School  
Graduate School of Business & Public Policy

(FIRST LAST), Advisor  
Naval Postgraduate School  
(Department)

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## APPENDIX C. TAILORED ICC SURVEY



### Inter-Organizational Collaborative Capacity Assessment

**Directions:** This questionnaire is designed to assess your organization's capacity to collaborate with other organizations. Please indicate the degree to which you agree or disagree with the following statements. If an item doesn't seem to apply or you "don't know", mark the appropriate response (adapted from Hocevar et al., 2012b, p. 6–11).

	Strongly Disagree					Strongly Agree	Don't Know
<b>Felt Need to Collaborate</b>							
Effective inter-organizational collaboration with QDP stakeholders is a high priority for my NESC organization.	1	2	3	4	5	6	7
My NESC organization recognizes the importance of working with other organizations in the QDP forum to achieve its mission.	1	2	3	4	5	6	7
Members of my NESC organization understand the benefits of collaborating with other organizations in the NESC.	1	2	3	4	5	6	7
There is agreement within my NESC organization about the purpose and value of inter-organizational collaboration in the QDP forum.	1	2	3	4	5	6	7
The success of my NESC organization's mission requires working effectively with other NESC organizations in the QDP forum.	1	2	3	4	5	6	7
<b>Strategic Action for Collaboration</b>							
We have clearly established goals for NESC inter-organizational collaboration in the QDP forum.	1	2	3	4	5	6	7
The leaders of my NESC organization emphasize the importance of inter-organizational collaboration in the QDP forum.	1	2	3	4	5	6	7

<b>Strategic Action for Collaboration (cont'd)</b>							
My NESC organization is willing to address inter-organizational goals discussed in the QDP forum, even if it must compromise its own interests.	1	2	3	4	5	6	7
My NESC organization considers the interests of other NESC organizations in its planning.	1	2	3	4	5	6	7
Leaders of my NESC organization work productively with those of other NESC organizations to improve our collaborations.	1	2	3	4	5	6	7
<b>Resource Investment in Collaboration</b>							
My NESC organization has access to adequate budget and resources to conduct effective and efficient inter-organizational collaboration with other NESC organizations.	1	2	3	4	5	6	7
My NESC organization is willing to commit resources to accomplish NESC QDP forum inter-organizational goals.	1	2	3	4	5	6	7
My NESC organization has assigned adequate personnel to the work required for effective NESC inter-organizational collaboration.	1	2	3	4	5	6	7
<b>Structural Flexibility</b>							
My NESC organization is flexible in adapting its processes and procedures to better fit with other NESC organizations.	1	2	3	4	5	6	7
My NESC organization has the ability to de-conflict existing policies and processes that impede collaboration with other NESC organizations.	1	2	3	4	5	6	7
My NESC organization invests appropriate time and energy to de-conflict existing policies and processes that impede collaboration.	1	2	3	4	5	6	7
My NESC organization's procedures are flexible and responsive to the requirements of other NESC organizations.	1	2	3	4	5	6	7
<b>Metrics for Collaboration</b>							
My NESC organization has measurement criteria to evaluate inter-organizational collaboration efforts with other NESC organizations.	1	2	3	4	5	6	7
My NESC organization has clear performance standards regarding inter-organizational work with other NESC organizations.	1	2	3	4	5	6	7

<b>Metrics for Collaboration (cont'd)</b>							
My NESC organization has measurement criteria to evaluate the outcomes of inter-organizational collaboration with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Rewards and Incentives</b>							
My NESC organization rewards members for investing time and energy to build collaborative relationships with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization rewards members for their successful inter-organizational collaborative activities with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Collaborative talents and achievements are considered when members are reviewed for annual and bi-annual evaluations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Engaging in inter-organizational activities with other NESC organizations at work is important to career advancement.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Collaborative Learning</b>							
My NESC organization commits adequate human and financial resources to training with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization has strong values and norms for learning from other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization works with other NESC organizations to identify lessons learned for improved collaboration.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization understands how the other NESC organizations with whom we work, make decisions.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization takes time to learn about the interests of other NESC stakeholder organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Information Sharing</b>							
My NESC organization has strong values and norms that encourage sharing information with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization provides other NESC organizations adequate access to information that is relevant to their work.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

<b>Information Sharing (cont'd)</b>							
Members of my NESC organization willingly share information with other NESC organizations.	1	2	3	4	5	6	7
<b>Social Capital</b>							
Members of my NESC organization know who to contact in other NESC organizations for information.	1	2	3	4	5	6	7
Members of my NESC organization take the initiative to build relationships with their counterparts in other NESC organizations.	1	2	3	4	5	6	7
Members of my NESC organization have strong networks of professional relationships with people in other NESC organizations.	1	2	3	4	5	6	7
<b>Individual Collaborative Capacities</b>							
Members of my NESC organization have the collaborative skills (e.g., conflict management, team process skills) needed to work effectively with other NESC organizations.	1	2	3	4	5	6	7
Members of my NESC organization understand the capabilities of other NESC organizations with which we work.	1	2	3	4	5	6	7
Members of my NESC organization respect the expertise of those in other NESC organizations with whom we work.	1	2	3	4	5	6	7
Members of my NESC organization understand how our work relates to the work of other NESC organizations with whom we need to collaborate.	1	2	3	4	5	6	7
Members of my NESC organization are able to appreciate another NESC organization's perspective on a problem or course of action.	1	2	3	4	5	6	7
Members of my NESC organization are willing to engage in a shared decision making process with other NESC organizations.	1	2	3	4	5	6	7
Members of my NESC organization seek input from other NESC organizations.	1	2	3	4	5	6	7
<b>Support for Individual Collaboration Efforts</b>							
Leadership of my NESC organization listens to input from subordinates about ways to improve NESC inter-organizational collaboration.	1	2	3	4	5	6	7

<b>Support for Individual Collaboration Efforts (cont'd)</b>							
My NESC organization gives people the authority they need to effectively collaborate with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization follows through on collaboration recommendations from PMO.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Members of my NESC organization are given clear guidance on goals and constraints for their inter-organizational work with other NESC organizations.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Collaboration Structures</b>							
My NESC organization has adequate and appropriate structures (e.g., liaison roles, teams, task forces) for effective inter-organizational collaboration <u>during</u> NESC QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization has adequate and appropriate structures (e.g., liaison roles, teams, task forces) for effective inter-organizational collaboration with NESC organizations <u>outside</u> of QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization establishes specific agreements about each NESC organization's roles and responsibilities in collaboration <u>during</u> QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization establishes specific agreements about each NESC organization's roles and responsibilities for collaboration <u>outside</u> of QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization's processes and procedures are structured to enable effective inter-organizational collaboration with other NESC organizations <u>during</u> QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization's processes and procedures are structured to enable effective inter-organizational collaboration with other NESC organizations <u>outside</u> of QDP forum meetings.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

<b>Collaborative Tools and Technologies</b>								
Our NESC inter-organizational collaborations are effectively supported by collaborative planning tools and technologies <u>during</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Our NESC inter-organizational collaborations are effectively supported by collaborative planning tools and technologies <u>outside of</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization has the necessary information systems' inter-operability to enable effective inter-organizational collaboration with other NESC organizations <u>during</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
My NESC organization has the necessary information systems' inter-operability to enable effective inter-organizational collaboration with other NESC organizations <u>outside of</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Our inter-organizational collaborations with other NESC organizations are supported by effective communication tools and technologies <u>during</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Our inter-organizational collaborations with other NESC organizations are supported by effective communication tools and technologies <u>outside of</u> QDP forum meetings.		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

Context and Demographics							
My NESC organization has a history of working well with other NESC organizations.	(1) Strongly Disagree	2	3	4	5	(6) Strongly Agree	(7) Don't Know
How would you rate the overall success of your NESC organization in collaborating with other NESC organizations?	(1) Very Poor	2	3	4	5	(6) Excellent	(7) Don't Know
How many people are employed by the NESC organization that you have been thinking about in answering these questions?	0-300	301-500	501-1000	1001-2000	2001+	Don't Know	
What percentage of your work week is spent doing inter-organizational work?	0%	0-25%	25-50%	50-75%	75-100%		
How many years have you worked for the NESC organization you have been thinking about in answering these questions?	<1 year	1-2 years	2-3 years	3-4 years	5+ years		
How many inter-organizational teams are you currently on? This may include other military collaborative inter-organizational teams not directly related to the NESC. (Ex: QDP BIT, Board of Directors, MMOWGLI participant, etc.)	1	2	3	4	5	6	7+
How high is the risk if inter-organizational NESC coordination is not effective?	(1) Insignificant	2	3	4	5	(6) Very Significant	(7) Don't Know

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## LIST OF REFERENCES

- Asch, B., Hosek, J. R., Arkes, J., Fair, C.C., Sharp, J., & Totten, M., (2002). *Military recruiting and retention after the fiscal year 2000 military pay legislation*. Santa Monica, CA: RAND.
- Bureau of Labor. (2015). Databases, tables & calculators by subject: Labor force statistics from the current population survey. Retrieved from <http://data.bls.gov/timeseries/LNS14000000>
- Congressional Budget Office (CBO). (2006). *Recruiting, retention, and future levels of military personnel*. Retrieved from <https://www.cbo.gov/sites/default/files/10-05-recruiting.pdf>
- Ferguson, M.E., III, Roughead, G., & Debbink, D. J. (2010). *Navy's total force vision for the 21st century*. Washington, DC: United States Navy Chief of Naval Operations. Retrieved from [http://www.navy.mil/features/NTF%20Vision%20\(Final\)\(11%20Jan%2010%201210hrs\).pdf](http://www.navy.mil/features/NTF%20Vision%20(Final)(11%20Jan%2010%201210hrs).pdf)
- Fowler, F. J. (2002). *Survey research methods* (3rd ed.). Thousand Oaks, CA: SAGE.
- Gray, B. (1991). *Collaborating: Finding common ground for multiparty problems*. San Francisco, CA: Jossey-Bass.
- Hocevar, S. P., Jansen, E., & Thomas, G. F. (2011, September). Inter-organizational collaboration: Addressing the challenge. *Homeland Security Affairs* (September). Retrieved from <https://www.hsaj.org/articles/64>
- Hocevar, S. P., Jansen, E., & Thomas, G. F. (2012a). *Codebook of scales, ICC collaborative capacity*. Monterey, CA: Naval Postgraduate School.
- Hocevar, S. P., Jansen, E., & Thomas, G. F. (2012b, May 1). *Inter-Organizational Collaborative Capacity (ICC) Assessment*. Monterey, CA: Naval Postgraduate School.
- Hocevar, S. P., Thomas, G. F., & Jansen, E. (2006). Building collaborative capacity: An innovative strategy for homeland security preparedness. In M. Beyerlein (Ed.), *Advances in interdisciplinary studies of work teams* (pp. 255–274). Retrieved from <http://www.emeraldinsight.com/doi/abs/10.1016/S1572-0977%2806%2912010-5>
- Navy Enlisted Accessions Supply Chain Business Improvement Team (NEASC BIT). (2013, July 17). *Navy enlisted accessions supply chain: NEASC 101 stakeholder guide, version 1.0* [PowerPoint slides]. Millington, TN: Production Management Office Business Improvement Team.

- Navy Enlisted Supply Chain Business Improvement Team (NESC BIT). (2012, September 17–19). *Navy enlisted supply chain: BIT offsite communications report*. Millington, TN: Production Management Office Business Improvement Team.
- Production Management Office (PMO). (2013a, August). *Production Management Office: The Navy enlisted accessions supply chain* [PowerPoint Slides]. Millington, TN: Production Management Office.
- Production Management Office (PMO). (2013b, December 11). *Navy Enlisted Supply Chain vision and concept of operations*. Pensacola, FL: Chief of Naval Personnel.
- Production Management Office Supply Chain Chief Operating Officer (PMO COO). (2013, December). *Street to fleet, Navy enlisted supply chain primer*. Retrieved from [http://www.public.navy.mil/bupers-npc/organization/bupers/PMO/Documents/NESC\\_Primer\\_Version\\_2013%20Dec%20Final.pdf](http://www.public.navy.mil/bupers-npc/organization/bupers/PMO/Documents/NESC_Primer_Version_2013%20Dec%20Final.pdf)
- Quarterly Demand Planning & Business Improvement Team (QDP&BIT). (2015, February 17). *Navy Enlisted Supply Chain Planning and Execution (NЕСP&E)*. [PowerPoint Slides]. Millington, TN: Production Management Office.
- Satterwhite, S. (2014, June). *Training and Education, Human Resources Center of Excellence (HRCOE) intro course* [PowerPoint Slides]. Pensacola, FL: Naval Education and Training Command.
- Thompson, J. D. (2007). *Organizations in action: Social science bases of administrative theory*. New Brunswick, NJ: Transaction.

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